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# *Capitalization Rate Study*

*Property and Special Taxes Department*  
*David J. Gau, Deputy Director*

*State-Assessed Properties Division*  
*Stanley Y. Siu, Chief*

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# Executive Summary

“The income approach to value includes any method of converting an income stream into a present value estimate (i.e., an indicator of current fair market value). The income approach is also called the capitalization approach because capitalization is the process of converting an expected income into an indicator of value.

The methods or techniques used in the income approach may be relatively simple (e.g., income or rent multipliers and direct capitalization), or more complex (e.g., various yield capitalization techniques). All of these methods are referred to as capitalization techniques because they convert an expected future income stream into a present value estimate.

The income approach requires careful application because small variations in its key variables (capitalization rate, duration of income stream, estimated income and expenses, etc.) will be mathematically leveraged into a wide range of estimated value. This is particularly true for the capitalization rate variable. The accuracy of the income approach is no greater than the validity of the assumptions used to estimate the key variables. The mathematical techniques used in the approach, while sometimes complicated, are merely tools for converting these assumptions into an estimate of current market value.”<sup>1</sup>

## ***I. Authority for Capitalization Rate Study***

Property Tax Rule 8 (g) (2) provides the authority for the method in which the capitalization rates were developed in this study. The rule states “the capitalization rate may be developed...

By deriving a weighted average of the capitalization rates for debt and for equity capital appropriate to the California money markets (the band-of-investment method) and adding increments for expenses that are excluded from outgo because they are based on the value that is being sought or the income that is being capitalized. The appraiser shall weight the rates for debt and equity capital by the respective amounts of such capital he deems most likely to be employed by prospective purchasers.”

## ***II. Band of Investment Approach***

In its simplest form, the band of investment method assumes that a purchaser would pay cash (or equity) for a portion of the property and would borrow the balance of the purchase price. For example:

|                                  |     |   |                |     |   |              |
|----------------------------------|-----|---|----------------|-----|---|--------------|
| Debt                             | 30% | x | Cost of Debt   | 7%  | = | 2.1%         |
| Equity                           | 70% | x | Cost of Equity | 12% | = | 8.4%         |
| Weighted Average Cost of Capital |     |   |                |     |   | <u>10.5%</u> |

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<sup>1</sup> Assessors’ Handbook 501, Basic Appraisal, Revised January 2002

# Executive Summary

This booklet contains a study for each of the eight major state assessee industry groups<sup>2</sup> in California. Industry data was compiled by groups with similar Value Line financial ratings.

Generally accepted appraisal procedures were used to estimate the cost of capital for debt and equity. The long term debt cost is the cost for a particular risk class of debt on the lien date. The equity rate reflects the rate of return or compensation that will satisfy the risk that a prospective purchaser would assume by investing in the property.

The rates derived in this study are basic capitalization rates and represent the after-tax return on investment only. Any increments required to be added by Property Tax Rule 8(g)(2), such as income or ad valorem tax components, are in addition to the rates listed.

## A. *Capital Structure - Prospective Purchaser vs. Company Specific*

State assessees often ask why the Board does not use the current capital structure of individual companies in the band-of-investment method. As explained in Rule 8 (g)(2), the appraiser shall weight the rates of debt and equity capital by the respective amounts of such capital deemed most likely to be employed by a prospective purchaser.

Therefore, the capital structure contemplated is a representative or typical structure of an industry group of companies with a similar bond rating, not that of the present owner. The objective of doing so is to strike an optimum capital structure from the perspective of a potential investor.

## B. *Company Specific Debt Rates*

In many cases the debt component of the capital structure for a prospective purchaser and the individual company being assessed may be similar. In cases where, in the judgement of staff, the debt ratings of the individual companies being assessed and the debt ratings of prospective purchasers are similar, the company-specific bond rating has been used to develop the appropriate debt component of the recommended capitalization rate.

## C. *Impact of Holding Companies on Determination of Capital Structure*

Many of the larger state assessees are subsidiaries of their holding company. Stock purchases related to a subsidiary must be made through the parent holding company. Since there is no direct market data for state assessee companies that are subsidiaries of a holding company, staff must rely, in great part, upon market data related to the holding company.

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<sup>2</sup> Gas, Electric & Water; Natural Gas Transmission; Local Exchange; Electric Generation; Interexchange; Wireless; Pipeline; Railroad

# Executive Summary

## **III. *Capital Asset Pricing Model***

The Capital Asset Pricing Model (CAPM) is a widely accepted theory used to estimate the cost of equity capital. In the application the CAPM, the most sensitive component affecting the outcome is the estimate of the beta<sup>3</sup> statistic. The choice of different time frames and frequencies of measurement in the calculation of the beta can produce significantly different results. Another factor in the use of beta is the choice of whether to use an unadjusted beta or a beta adjusted to reflect the fact that betas tend to revert to the mean over time. In this study, betas were obtained from three separate sources: one adjusted (Value Line) and two unadjusted. Generally the betas from the three sources are averaged to establish the beta used to estimate the cost of equity capital for a specific industry. In general, the average beta for highly regulated industries such as gas or electric transmission and distribution understates the risk inherent in those securities. For companies in highly regulated environments, the Value Line adjusted beta was chosen as a better estimate of the relative risk in the calculation of the required equity return.

## **IV. *Flotation Costs***

When new issues of both debt and equity capital are sold to investors, the issuing company incurs transaction costs such as underwriting fees, legal expenses, and prospectus preparation costs. These costs of issuing securities are known as flotation costs. Flotation costs effectively reduce the net proceeds that a firm will receive from issuing securities. This is much like loan fees or points on a mortgage. The cost of capital is adjusted upward to reflect the flotation costs incurred to issue the securities. Since the flotation costs are reflected in the weighted average cost of capital, the flotation costs should not be allowed as expenses in projecting cash flows to be capitalized. Each basic capitalization rate in this study has been adjusted to reflect flotation costs.

## **V. *Size Adjustment***

Investors typically consider small capitalization stocks as riskier investments than large capitalization stocks. It follows that investors require additional return to take on the risk of an investment in a small capitalization stock. According to Ibbotson & Associates<sup>4</sup>, the additional risk is not reflected in the calculation of beta. Where the Capital Asset Pricing Model was relied upon in assigning the cost of capital to companies whose size is ranked in the lower deciles of the New York Stock Exchange, the size premium adjustment as reported by Ibbotson Associates in the 2005 Valuation Edition Yearbook was considered.

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<sup>3</sup> The covariance of the returns of a security regressed against the returns of the overall market - a measurement of relative volatility

<sup>4</sup> SBBI: 2005 Valuation Edition Yearbook

# Executive Summary

## ***VI. Utilization of Other Studies and Data***

Staff appraisers considered data and capitalization rate studies submitted by assessees and interested parties and, where appropriate utilized them in the development of the staff derived rates.

The capitalization rates published in this study are intended to be applied to the unitary operations of the companies subject to assessment by the California State Board of Equalization.

**California State Board of Equalization  
State-Assessed Properties Division  
2007 Capitalization Rate Study  
Gas, Electric and Water Companies**

| SBE No.  | Company Name                       | Ratings   |                    |           | Capital Structure |                    |      | Rates of Return  |                    |       | Basic<br>Cap<br>Rate |
|--|------------------------------------|-----------|--------------------|-----------|-------------------|--------------------|------|------------------|--------------------|-------|----------------------|
|  |                                    | Financial | Preferred<br>Stock | Bond      | Common<br>Equity  | Preferred<br>Stock | Debt | Common<br>Equity | Preferred<br>Stock | Debt  |                      |
| Gas and Electric Companies                     |                                    |           |                    |           |                   |                    |      |                  |                    |       |                      |
| 141  | San Diego Gas & Electric           | A         | baa1               | A1        | 53%               | 2%                 | 45%  | 11.31%           | 6.45%              | 5.99% | 8.82%                |
| 135  | Pacific Gas & Electric             | B++       | baa3               | Baa1      | 52%               | 1%                 | 47%  | 11.99%           | 6.53%              | 6.21% | 9.22%                |
| 148  | Southern California Edison         | B         | b3                 | A3        | 52%               | 1%                 | 47%  | 12.25%           | 6.75%              | 6.13% | 9.32%                |
| 184  | Avista Corporation                 | B         | ba3                | Baa3      | 52%               | 1%                 | 47%  | 12.25%           | 6.64%              | 6.40% | 9.44%                |
| 106  | PacifiCorp                         | Not Rated | baa3               | A3        | 52%               | 1%                 | 47%  | 12.25%           | 6.53%              | 6.13% | 9.32%                |
| 146  | Sierra Pacific Power               | C+        | b2                 | Ba1       | 52%               | 1%                 | 47%  | 12.99%           | 6.71%              | 6.50% | 9.88%                |
| 191  | Arizona Public Service Company     | Not Rated |                    | Baa1      | 51%               |                    | 49%  | 13.26%           |                    | 6.21% | 9.80%                |
| 103  | Anza Electric Cooperative          | Not Rated |                    | Not Rated | 51%               |                    | 49%  | 13.26%           |                    | 7.15% | 10.27%               |
| 156  | Atlantic Path 15, LLC              | Not Rated |                    | Not Rated | 51%               |                    | 49%  | 13.26%           |                    | 7.15% | 10.27%               |
| 160  | Valley Electric Association        | Not Rated |                    | Not Rated | 51%               |                    | 49%  | 13.26%           |                    | 7.15% | 10.27%               |
| 173  | Surprise Valley Electrification    | Not Rated |                    | Not Rated | 51%               |                    | 49%  | 13.26%           |                    | 7.15% | 10.27%               |
| 176  | Plumas-Sierra Rural Electric       | Not Rated |                    | Not Rated | 51%               |                    | 49%  | 13.26%           |                    | 7.15% | 10.27%               |
| 185  | Mountain Utilities                 | Not Rated |                    | Not Rated | 51%               |                    | 49%  | 13.26%           |                    | 7.15% | 10.27%               |
| 193  | Southwest Transmission Coop., Inc. | Not Rated |                    | Not Rated | 51%               |                    | 49%  | 13.26%           |                    | 7.15% | 10.27%               |
| Natural Gas Distribution and Storage Companies |                                    |           |                    |           |                   |                    |      |                  |                    |       |                      |
| 149  | Southern California Gas            | A         | baa1               | A1        | 53%               | 2%                 | 45%  | 11.64%           | 6.45%              | 5.99% | 8.99%                |
| 152  | Southwest Gas                      | B         | baa3               | Baa3      | 52%               | 1%                 | 47%  | 11.88%           | 6.53%              | 6.40% | 9.25%                |
| 192  | Alpine Natural Gas                 | Not Rated |                    | Not Rated | 51%               |                    | 49%  | 12.73%           |                    | 7.15% | 10.00%               |
| 194  | West Coast Gas Company, Inc.       | Not Rated |                    | Not Rated | 51%               |                    | 49%  | 12.73%           |                    | 7.15% | 10.00%               |
| 195  | Wild Goose, Inc.                   | Not Rated |                    | Not Rated | 51%               |                    | 49%  | 12.73%           |                    | 7.15% | 10.00%               |
| 198  | Lodi Gas Storage, LLC              | Not Rated |                    | Not Rated | 51%               |                    | 49%  | 12.73%           |                    | 7.15% | 10.00%               |
| Water Companies                                |                                    |           |                    |           |                   |                    |      |                  |                    |       |                      |
| 101  | Southern California Water          | B+        |                    | A2        | 55%               |                    | 45%  | 10.47%           |                    | 6.05% | 8.48%                |

**California State Board of Equalization  
State-Assessed Properties Division  
2007 Capitalization Rate Study  
Natural Gas Transmission Companies**

| SBE No. | Company Name                             | Ratings   |           | Capital Structure |      | Rates of Return  |       | Basic<br>Cap<br>Rate |
|---------|--|-----------|-----------|-------------------|------|------------------|-------|----------------------|
|         |  | Financial | Bond      | Common<br>Equity  | Debt | Common<br>Equity | Debt  |                      |
| 153     | Transwestern Pipeline Company            | Not Rated | Not Rated | 75%               | 25%  | 12.04%           | 6.29% | 10.60%               |
| 180     | North Baja Pipeline, LLC                 | Not Rated | Not Rated | 75%               | 25%  | 12.04%           | 6.29% | 10.60%               |
| 187     | Mojave Pipeline Company                  | Not Rated | Not Rated | 75%               | 25%  | 12.04%           | 6.29% | 10.60%               |
| 188     | Kern River Gas Transmission Company      | Not Rated | Not Rated | 75%               | 25%  | 12.04%           | 6.29% | 10.60%               |
| 189     | Standard Pacific Gas Line Incorporated   | Not Rated | Not Rated | 75%               | 25%  | 12.04%           | 6.29% | 10.60%               |
| 190     | Tuscarora Gas Transmission Company       | Not Rated | Not Rated | 75%               | 25%  | 12.04%           | 6.29% | 10.60%               |
| 196     | Questar Southern Trails Pipeline Company | Not Rated | Not Rated | 75%               | 25%  | 12.04%           | 6.29% | 10.60%               |
| 197     | El Paso Natural Gas Company              | Not Rated | Not Rated | 75%               | 25%  | 12.04%           | 6.29% | 10.60%               |

**California State Board of Equalization  
State-Assessed Properties Division  
2007 Capitalization Rate Study  
Local Exchange Companies**

| SBE No.    | Company Name   | Ratings   |           | Capital Structure |      | Rates of Return  |       | Basic<br>Cap<br>Rate |
|------------|--|-----------|-----------|-------------------|------|------------------|-------|----------------------|
|            |  | Financial | Bond      | Common<br>Equity  | Debt | Common<br>Equity | Debt  |                      |
| <b>279</b> | <b>Pacific Bell Telephone Company</b>                      | A+        | A2        | 80%               | 20%  | 12.30%           | 6.05% | <b>11.05%</b>        |
| <b>201</b> | <b>Verizon California, Inc.</b>                            | A+        | A3        | 80%               | 20%  | 12.30%           | 6.13% | <b>11.07%</b>        |
| <b>294</b> | <b>SureWest Telephone</b>                                  | B         | Not Rated | 70%               | 30%  | 13.35%           | 6.29% | <b>11.23%</b>        |
| <b>284</b> | <b>Citizens Telecommunications Co. of California, Inc.</b> | B         | Not Rated | 70%               | 30%  | 13.35%           | 6.29% | <b>11.23%</b>        |
|            | <b>Other Local Exchange Companies</b>                      | Not Rated | Not Rated | 70%               | 30%  | 14.66%           | 6.94% | <b>12.35%</b>        |



**California State Board of Equalization  
State-Assessed Properties Division  
2007 Capitalization Rate Study  
Electric Generation Facilities**

| Facility Type                                       | Ratings   |           | Capital Structure |      | Rates of Return  |       | Basic<br>Cap<br>Rate <sup>4</sup> |
|---|-----------|-----------|-------------------|------|------------------|-------|-----------------------------------|
|   | Financial | Bond      | Common<br>Equity  | Debt | Common<br>Equity | Debt  |                                   |
| <b>Recently Constructed Facilities <sup>1</sup></b> | C+        | Not Rated | 60%               | 40%  | 15.71%           | 6.83% | <b>12.16%</b>                     |
| <b>Composite Facilities <sup>2</sup></b>            | C+        | Not Rated | 60%               | 40%  | 17.02%           | 7.34% | <b>13.14%</b>                     |
| <b>Older Facilities <sup>3</sup></b>                | C+        | Not Rated | 60%               | 40%  | 17.80%           | 7.85% | <b>13.82%</b>                     |

<sup>1</sup> Recently Constructed Facilities - Facilities constructed after September 1996 incorporating modern electric generation technologies at the time they were built.

<sup>2</sup> Composite Facilities - Facilities that were sold off by vertically integrated electric utilities and for which replacements of some obsolete generation units with modern electric generation technologies have been made.

<sup>3</sup> Older Facilities - Facilities that were sold off by vertically integrated electric utilities and for which no replacements, other than for routine maintenance, have been made.

<sup>4</sup> Staff may adjust the rates stated above if the specific situation of a facility warrants an adjustment to its basic capitalization rate.

**California State Board of Equalization  
State-Assessed Properties Division  
2007 Capitalization Rate Study  
Interexchange Telephone Companies**

| SBE No.     | Company Name                                       | Ratings   |           | Capital Structure |                   | Rates of Return  |                   | Basic<br>Cap<br>Rate |
|-------------|--|-----------|-----------|-------------------|-------------------|------------------|-------------------|----------------------|
|             |  | Financial | Bond      | Common<br>Equity  | Long Term<br>Debt | Common<br>Equity | Long Term<br>Debt |                      |
| <b>2310</b> | <b>AT&amp;T Communications, Inc.</b>               | A+        | A2        | 75%               | 25%               | 14.14%           | 6.05%             | <b>12.12%</b>        |
| <b>2014</b> | <b>Sprint Communications Co., L.P.</b>             | B+        | Baa3      | 75%               | 25%               | 14.66%           | 6.40%             | <b>12.59%</b>        |
| <b>2274</b> | <b>MCIWorldCom Network Services, Inc.</b>          | Not Rated | Not Rated | 75%               | 25%               | 14.66%           | 6.40%             | <b>12.59%</b>        |
| <b>2372</b> | <b>MCI Metro Access Transmission Services, LLC</b> | Not Rated | Not Rated | 75%               | 25%               | 14.66%           | 6.40%             | <b>12.59%</b>        |
| <b>7630</b> | <b>Broadwing Communications, LLC</b>               | B         | Not Rated | 75%               | 25%               | 14.66%           | 6.40%             | <b>12.59%</b>        |
| <b>7522</b> | <b>Time Warner Telecom of California, L.P.</b>     | B         | Baa2      | 75%               | 25%               | 14.66%           | 6.29%             | <b>12.57%</b>        |
| <b>7761</b> | <b>Level 3 Communications, LLC</b>                 | C++       | Caa2      | 60%               | 40%               | 16.75%           | 7.26%             | <b>12.96%</b>        |
| <b>2043</b> | <b>Pac-West Telecomm, Inc.</b>                     | C+        | Not Rated | 60%               | 40%               | 16.75%           | 7.37%             | <b>13.00%</b>        |
| <b>2463</b> | <b>Qwest Communications Corporation</b>            | C+        | Not Rated | 60%               | 40%               | 16.75%           | 7.37%             | <b>13.00%</b>        |
| <b>7686</b> | <b>Primus Telecommunications, Inc.</b>             | C         | Not Rated | 60%               | 40%               | 16.75%           | 7.48%             | <b>13.04%</b>        |
|             | <b>Other Interexchange Carriers</b>                | Not Rated | Not Rated | 60%               | 40%               | 19.90%           | 8.13%             | <b>15.19%</b>        |
|             | <b>Other Interexchange Resellers</b>               | Not Rated | Not Rated | 60%               | 40%               | 23.04%           | 8.90%             | <b>17.38%</b>        |

**California State Board of Equalization  
State-Assessed Properties Division  
2007 Capitalization Rate Study  
Wireless Companies**

| SBE No.     | Company Name  | Rating | Capital Structure |      | Rates of Return  |       | Basic<br>Cap<br>Rate |
|-------------|---|--------|-------------------|------|------------------|-------|----------------------|
|             |   |        | Common<br>Equity  | Debt | Common<br>Equity | Debt  |                      |
| <b>2512</b> | <b>Verizon Wireless (VAW) LLC</b>                   | NR-1   | 75%               | 25%  | 13.61%           | 6.10% | <b>11.74%</b>        |
| <b>2513</b> | <b>Sacramento Valley Limited Partnership</b>        | NR-1   | 75%               | 25%  | 13.61%           | 6.10% | <b>11.74%</b>        |
| <b>2532</b> | <b>Los Angeles SMSA Ltd., Partnership</b>           | NR-1   | 75%               | 25%  | 13.61%           | 6.10% | <b>11.74%</b>        |
| <b>2559</b> | <b>GTE Mobilnet of California, Ltd. Partnership</b> | NR-1   | 75%               | 25%  | 13.61%           | 6.10% | <b>11.74%</b>        |
| <b>2606</b> | <b>Cingular Wireless, LLC</b>                       | NR-1   | 75%               | 25%  | 13.61%           | 6.10% | <b>11.74%</b>        |
| <b>2720</b> | <b>Sprint PCS</b>                                   | NR-1   | 75%               | 25%  | 13.61%           | 6.10% | <b>11.74%</b>        |
| <b>2737</b> | <b>Sprint Nextel Corporation</b>                    | NR-1   | 75%               | 25%  | 13.61%           | 6.10% | <b>11.74%</b>        |
| <b>2748</b> | <b>OmniPoint Communications Inc.</b>                | NR-1   | 75%               | 25%  | 13.61%           | 6.10% | <b>11.74%</b>        |
|             |   |        |                   |      |                  |       |                      |
| <b>2552</b> | <b>Fresno MSA Limited Partnership</b>               | NR-2   | 75%               | 25%  | 14.40%           | 6.61% | <b>12.45%</b>        |
| <b>2627</b> | <b>GTE Mobilnet of Santa Barbara L.P.</b>           | NR-2   | 75%               | 25%  | 14.40%           | 6.61% | <b>12.45%</b>        |
| <b>2671</b> | <b>California Rural Service Area #1, Inc.</b>       | NR-2   | 75%               | 25%  | 14.40%           | 6.61% | <b>12.45%</b>        |
| <b>2733</b> | <b>Metro PCS California/Florida, Inc.</b>           | NR-2   | 75%               | 25%  | 14.40%           | 6.61% | <b>12.45%</b>        |
| <b>2745</b> | <b>West Coast P.C.S.</b>                            | NR-2   | 75%               | 25%  | 14.40%           | 6.61% | <b>12.45%</b>        |
|             |   |        |                   |      |                  |       |                      |
|             | <b>Other Wireless Companies</b>                     | NR-3   | 70%               | 30%  | 17.02%           | 7.12% | <b>14.05%</b>        |
|             |   |        |                   |      |                  |       |                      |
|             | <b>Wireless Reseller Companies</b>                  | NR-4   | 65%               | 35%  | 19.63%           | 7.63% | <b>15.43%</b>        |

NR-1: Companies providing wireless service to the largest California service areas

NR-2: Companies providing wireless service to midsize California service areas

NR-3: Other wireless carriers (including Radio Telephone companies)

NR-4: All wireless reseller companies

**California State Board of Equalization  
State-Assessed Properties Division  
2007 Capitalization Rate Study  
Pipeline Companies**

| SBE No.    | Company Name                                  | Ratings   |      | Capital Structure |      | Rates of Return |       | Basic<br>Cap<br>Rate |
|------------|---|-----------|------|-------------------|------|-----------------|-------|----------------------|
|            |   | Financial | Bond | Common<br>Equity  | Debt | Equity          | Debt  |                      |
| <b>402</b> | <b>CALNEV Pipe Line LLC</b>                   | NR-1      | NR-b | 70%               | 30%  | 12.57%          | 6.45% | 10.73%               |
| <b>461</b> | <b>SFPP, L.P.</b>                             | NR-1      | NR-b | 70%               | 30%  | 12.57%          | 6.45% | 10.73%               |
| <b>479</b> | <b>Chevron Pipeline Company</b>               | NR-2      | NR-b | 70%               | 30%  | 13.09%          | 6.45% | 11.10%               |
| <b>468</b> | <b>Shell California Pipeline Company L.P.</b> | NR-2      | NR-b | 70%               | 30%  | 13.09%          | 6.45% | 11.10%               |
| <b>486</b> | <b>Pacific Pipeline System, LLC</b>           | NR-2      | NR-b | 70%               | 30%  | 13.09%          | 6.45% | 11.10%               |
| <b>480</b> | <b>ConocoPhillips Pipe Line Company</b>       | NR-2      | NR-b | 70%               | 30%  | 13.09%          | 6.45% | 11.10%               |
|            | <b>Other Pipeline Companies</b>               | NR-3      | NR-c | 70%               | 30%  | 14.14%          | 7.47% | 12.14%               |

**California State Board of Equalization  
State-Assessed Properties Division  
2007 Capitalization Rate Study  
Railroad Companies**

| <b>SBE<br/>No.</b> | <b>Company<br/>Name</b>                                  | <b>Ratings</b>   |             | <b>Capital Structure</b> |             | <b>Rates of Return</b>   |             | <b>Basic<br/>Cap<br/>Rate</b> |
|--------------------|--|------------------|-------------|--------------------------|-------------|--------------------------|-------------|-------------------------------|
|                    |  | <b>Financial</b> | <b>Bond</b> | <b>Common<br/>Equity</b> | <b>Debt</b> | <b>Common<br/>Equity</b> | <b>Debt</b> |                               |
| <b>843</b>         | <b>Union Pacific Railroad Company</b>                    | A                | Baa2        | 75%                      | 25%         | 13.87%                   | 6.45%       | <b>12.02%</b>                 |
| <b>804</b>         | <b>BNSF Railway Company</b>                              | B++              | Baa2        | 75%                      | 25%         | 13.87%                   | 6.45%       | <b>12.02%</b>                 |
| <b>802</b>         | <b>Central Oregon &amp; Pacific Railroad</b>             | NR-1             | NR-1        | 60%                      | 40%         | 15.97%                   | 7.98%       | <b>12.77%</b>                 |
| <b>810</b>         | <b>California Northern Railroad</b>                      | NR-1             | NR-1        | 60%                      | 40%         | 15.97%                   | 7.98%       | <b>12.77%</b>                 |
| <b>813</b>         | <b>Pacific Harbor Lines</b>                              | NR-1             | NR-1        | 60%                      | 40%         | 15.97%                   | 7.98%       | <b>12.77%</b>                 |
| <b>850</b>         | <b>Modesto &amp; Empire Traction Company</b>             | NR-1             | NR-1        | 60%                      | 40%         | 15.97%                   | 7.98%       | <b>12.77%</b>                 |
| <b>865</b>         | <b>San Diego &amp; Imperial Valley Railroad Co. Inc.</b> | NR-1             | NR-1        | 60%                      | 40%         | 15.97%                   | 7.98%       | <b>12.77%</b>                 |
| <b>882</b>         | <b>Trona Railway Co.</b>                                 | NR-1             | NR-1        | 60%                      | 40%         | 15.97%                   | 7.98%       | <b>12.77%</b>                 |
| <b>897</b>         | <b>San Joaquin Valley Railroad Company</b>               | NR-1             | NR-1        | 60%                      | 40%         | 15.97%                   | 7.98%       | <b>12.77%</b>                 |
| <b>899</b>         | <b>Arizona &amp; California Railroad</b>                 | NR-1             | NR-1        | 60%                      | 40%         | 15.97%                   | 7.98%       | <b>12.77%</b>                 |
|                    | <b>Other Railroad Companies</b>                          | NR-2             | NR-2        | 60%                      | 40%         | 16.23%                   | 9.00%       | <b>13.34%</b>                 |

**California State Board of Equalization  
State-Assessed Properties Division  
2007 Capitalization Rate Study  
Gas, Electric and Water Companies**

| SBE No.  | Company Name                       | Ratings   |                 |           | Capital Structure |                 |      | Rates of Return |                 |       | Basic Cap Rate |
|--|------------------------------------|-----------|-----------------|-----------|-------------------|-----------------|------|-----------------|-----------------|-------|----------------|
|  |                                    | Financial | Preferred Stock | Bond      | Common Equity     | Preferred Stock | Debt | Common Equity   | Preferred Stock | Debt  |                |
| Gas and Electric Companies                     |                                    |           |                 |           |                   |                 |      |                 |                 |       |                |
| 141  | San Diego Gas & Electric           | A         | baa1            | A1        | 53%               | 2%              | 45%  | 11.31%          | 6.45%           | 5.99% | 8.82%          |
| 135  | Pacific Gas & Electric             | B++       | baa3            | Baa1      | 52%               | 1%              | 47%  | 11.99%          | 6.53%           | 6.21% | 9.22%          |
| 148  | Southern California Edison         | B         | b3              | A3        | 52%               | 1%              | 47%  | 12.25%          | 6.75%           | 6.13% | 9.32%          |
| 184  | Avista Corporation                 | B         | ba3             | Baa3      | 52%               | 1%              | 47%  | 12.25%          | 6.64%           | 6.40% | 9.44%          |
| 106  | PacifiCorp                         | Not Rated | baa3            | A3        | 52%               | 1%              | 47%  | 12.25%          | 6.53%           | 6.13% | 9.32%          |
| 146  | Sierra Pacific Power               | C+        | b2              | Ba1       | 52%               | 1%              | 47%  | 12.99%          | 6.71%           | 6.50% | 9.88%          |
| 191  | Arizona Public Service Company     | Not Rated |                 | Baa1      | 51%               |                 | 49%  | 13.26%          |                 | 6.21% | 9.80%          |
| 103  | Anza Electric Cooperative          | Not Rated |                 | Not Rated | 51%               |                 | 49%  | 13.26%          |                 | 7.15% | 10.27%         |
| 156  | Atlantic Path 15, LLC              | Not Rated |                 | Not Rated | 51%               |                 | 49%  | 13.26%          |                 | 7.15% | 10.27%         |
| 160  | Valley Electric Association        | Not Rated |                 | Not Rated | 51%               |                 | 49%  | 13.26%          |                 | 7.15% | 10.27%         |
| 173  | Surprise Valley Electrification    | Not Rated |                 | Not Rated | 51%               |                 | 49%  | 13.26%          |                 | 7.15% | 10.27%         |
| 176  | Plumas-Sierra Rural Electric       | Not Rated |                 | Not Rated | 51%               |                 | 49%  | 13.26%          |                 | 7.15% | 10.27%         |
| 185  | Mountain Utilities                 | Not Rated |                 | Not Rated | 51%               |                 | 49%  | 13.26%          |                 | 7.15% | 10.27%         |
| 193  | Southwest Transmission Coop., Inc. | Not Rated |                 | Not Rated | 51%               |                 | 49%  | 13.26%          |                 | 7.15% | 10.27%         |
| Natural Gas Distribution and Storage Companies |                                    |           |                 |           |                   |                 |      |                 |                 |       |                |
| 149  | Southern California Gas            | A         | baa1            | A1        | 53%               | 2%              | 45%  | 11.64%          | 6.45%           | 5.99% | 8.99%          |
| 152  | Southwest Gas                      | B         | baa3            | Baa3      | 52%               | 1%              | 47%  | 11.88%          | 6.53%           | 6.40% | 9.25%          |
| 192  | Alpine Natural Gas                 | Not Rated |                 | Not Rated | 51%               |                 | 49%  | 12.73%          |                 | 7.15% | 10.00%         |
| 194  | West Coast Gas Company, Inc.       | Not Rated |                 | Not Rated | 51%               |                 | 49%  | 12.73%          |                 | 7.15% | 10.00%         |
| 195  | Wild Goose, Inc.                   | Not Rated |                 | Not Rated | 51%               |                 | 49%  | 12.73%          |                 | 7.15% | 10.00%         |
| 198  | Lodi Gas Storage, LLC              | Not Rated |                 | Not Rated | 51%               |                 | 49%  | 12.73%          |                 | 7.15% | 10.00%         |
| Water Companies                                |                                    |           |                 |           |                   |                 |      |                 |                 |       |                |
| 101  | Southern California Water          | B+        |                 | A2        | 55%               |                 | 45%  | 10.47%          |                 | 6.05% | 8.48%          |

**2007 Capitalization Rate Study  
Gas, Electric and Water Companies  
Industry Notes**

- The focus of the of the 2007 capitalization rate study is to develop capitalization rates that reflect regulated gas and electric operations.
- Staff considered the equity rates derived from the sample as well as recent California Public Utilities Commission decisions that established rates of return. Capital structures used are based on staff judgment with consideration given to the CPUC authorized capital structures for the companies in the industry. A potential purchaser would likely use the capital structure that the regulatory agency would deem optimum to the ratepayers and the utility. Thus, the capital structure represented by the sample companies is given less consideration. The staff also reviewed capitalization rate studies submitted by PG&E and SCE.
- Staff relied upon the results of the following models in the development of equity rates:
  1. Discounted Cash Flow
  2. Capital Asset Pricing Model-Consideration was giving to both the ex post and ex ante risk premiums
  3. CPUC decisions that established rates of returns
- CMS Energy was not included in the 2007 sample due to its stressed financial condition.

**2007 Capitalization Rate Study  
Gas and Electric Companies  
Flotation Cost Adjustment**

| Equity               |                     |                        |                  | Preferred Stock   |                     |                        |                  | Debt              |                     |                        |                  |
|----------------------|---------------------|------------------------|------------------|-------------------|---------------------|------------------------|------------------|-------------------|---------------------|------------------------|------------------|
| Value Line<br>Rating | Recommended<br>Rate | Flotation<br>Cost in % | Adjusted<br>Rate | Moody's<br>Rating | Recommended<br>Rate | Flotation<br>Cost in % | Adjusted<br>Rate | Moody's<br>Rating | Recommended<br>Rate | Flotation<br>Cost in % | Adjusted<br>Rate |
| A                    | 10.80%              | 4.50%                  | 11.31%           |                   |                     |                        |                  | Aa3               | 5.82%               | 1.70%                  | 5.92%            |
| B++                  | 11.45%              | 4.50%                  | 11.99%           | baa1              | 6.34%               | 1.70%                  | 6.45%            | A1                | 5.88%               | 1.70%                  | 5.99%            |
| B                    | 11.70%              | 4.50%                  | 12.25%           | baa2              | 6.38%               | 1.70%                  | 6.49%            | A2                | 5.95%               | 1.70%                  | 6.05%            |
| C++                  | 12.41%              | 4.50%                  | 12.99%           | baa3              | 6.42%               | 1.70%                  | 6.53%            | A3                | 6.03%               | 1.70%                  | 6.13%            |
| C                    | 12.41%              | 4.50%                  | 12.99%           | ba1               | 6.45%               | 1.70%                  | 6.56%            | Baa1              | 6.10%               | 1.70%                  | 6.21%            |
| NR                   | 12.66%              | 4.50%                  | 13.26%           | ba2               | 6.49%               | 1.70%                  | 6.60%            | Baa2              | 6.18%               | 1.70%                  | 6.29%            |
|                      |                     |                        |                  | ba3               | 6.53%               | 1.70%                  | 6.64%            | Baa3              | 6.29%               | 1.70%                  | 6.40%            |
|                      |                     |                        |                  | b2                | 6.60%               | 1.70%                  | 6.71%            | Ba1               | 6.39%               | 1.70%                  | 6.50%            |
|                      |                     |                        |                  | b3                | 6.64%               | 1.70%                  | 6.75%            | Ba2               | 6.50%               | 1.70%                  | 6.61%            |
|                      |                     |                        |                  | caa1              | 6.67%               | 1.70%                  | 6.79%            | Ba3               | 6.61%               | 1.70%                  | 6.72%            |
|                      |                     |                        |                  | caa3              | 6.71%               | 1.70%                  | 6.83%            | B1                | 6.71%               | 1.70%                  | 6.83%            |
|                      |                     |                        |                  |                   |                     |                        |                  | B3                | 6.93%               | 1.70%                  | 7.05%            |
|                      |                     |                        |                  |                   |                     |                        |                  | NR                | 7.03%               | 1.70%                  | 7.15%            |

$$\text{Cost of Capital Adjusted for Flotation Costs} = \frac{K_u}{1 - f}$$

Where:  $K_u$  = The cost of capital unadjusted for flotation costs

$f$  = Flotation cost as a percentage of the value of securities issued



**2007 Capitalization Rate Study  
Gas and Electric Companies  
Summary of Rates of Return**

| Common Equity        |                                | Perferred Stock       |                 |                                | Bonds                  |                 |                                |
|----------------------|--------------------------------|-----------------------|-----------------|--------------------------------|------------------------|-----------------|--------------------------------|
| Value Line<br>Rating | Rate of<br>Return <sup>1</sup> | Moody's P/S<br>Yields | Moody<br>Rating | Rate of<br>Return <sup>2</sup> | Moody's Bond<br>Yields | Moody<br>Rating | Rate of<br>Return <sup>2</sup> |
| A                    | 10.80%                         | aa=N/A                | aa1             | 6.22%                          | Aaa=N/A                | Aaa2            | 5.54%                          |
| B++                  | 11.45%                         |                       | aa2             | 6.23%                          |                        | Aaa3            | 5.61%                          |
| B                    | 11.70%                         |                       | aa3             | 6.23%                          |                        | Aa1             | 5.68%                          |
| C++                  | 12.41%                         | a=6.27%               | a1              | 6.25%                          | Aa=5.75%               | Aa2             | 5.75%                          |
| C                    | 12.41%                         |                       | a2              | 6.27%                          |                        | Aa3             | 5.82%                          |
| NR <sup>3</sup>      | 12.66%                         |                       | a3              | 6.31%                          |                        | A1              | 5.88%                          |
|                      |                                | baa=6.38%             | baa1            | 6.34%                          | A=5.95%                | A2              | 5.95%                          |
|                      |                                |                       | baa2            | 6.38%                          |                        | A3              | 6.03%                          |
|                      |                                |                       | baa3            | 6.42%                          |                        | Baa1            | 6.10%                          |
|                      |                                |                       | ba1             | 6.45%                          | Baa=6.18%              | Baa2            | 6.18%                          |
|                      |                                |                       | ba2             | 6.49%                          |                        | Baa3            | 6.29%                          |
|                      |                                |                       | ba3             | 6.53%                          |                        | Ba1             | 6.39%                          |
|                      |                                |                       | b1              | 6.56%                          |                        | Ba2             | 6.50%                          |
|                      |                                |                       | b2              | 6.60%                          |                        | Ba3             | 6.61%                          |
|                      |                                |                       | b3              | 6.64%                          |                        | B1              | 6.71%                          |
|                      |                                |                       | caa1            | 6.67%                          |                        | B2              | 6.82%                          |
|                      |                                |                       | caa3            | 6.71%                          |                        | B3              | 6.93%                          |
|                      |                                |                       |                 |                                |                        | NR              | 7.03%                          |

<sup>1</sup> The Rate of Return on Common Equity was developed by staff based on the relative risk of the utilities in conjunction with the results of the various financial models and pertinent information from various sources. Consideration was given to the recent California Public Utilities Commission (CPUC) decisions that established rates of return. The 2007 return on equity (ROE) for PG&E is 11.35% which results in a corresponding 8.79% return on rate base (ROR). ROE for SCE is 11.60% which results in a corresponding 8.77% ROR, and ROE for SDG&E is 10.70% which results in a corresponding 8.23% ROR. These rates have not been changed since last year. Southern California Gas has a benchmark ROR of 8.68% which remains in effect until further revised by the CPUC.

<sup>2</sup> Rates of Return on Preferred Stocks and Bonds were based on Moody's "Utility Preferred Stock Yields" and "Utility Bond Yields", December 2006 report. However, because Moody assigns a yield to the groups Aaa, Aa, A and Baa for bonds; and aa, a, and baa for preferred stocks, the staff interpolates the difference between these groups in order to achieve a further refinement of the ratings.

<sup>3</sup> For companies whose common equity are not rated (NR), staff judgment is used in assigning the rates of return because the circumstances or reasons for not rating the common equity are different for each company.

**2007 Capitalization Rate Study  
Gas and Electric Companies  
Capital Asset Pricing Model - Ex Ante**

| Component   | Value Line Ratings |               |               |
|---|--------------------|---------------|---------------|
|   | A++, A+            | B++, B+, B    | C++, C+, C    |
| Expected Future Return, S&P 500 <sup>1</sup>                    | 13.71%             | 13.71%        | 13.71%        |
| Less: Risk Free Return 25 - 30 Year Treasury Bonds <sup>2</sup> | 4.83%              | 4.83%         | 4.83%         |
| Risk Premium  | 8.88%              | 8.88%         | 8.88%         |
| Beta <sup>3</sup>   | 1.05               | 1.10          | 1.26          |
| Adjusted Risk Premium   | 9.36%              | 9.73%         | 11.16%        |
| Risk Free Return 25 - 30 Year Treasury Bonds <sup>2</sup>       | 4.83%              | 4.83%         | 4.83%         |
| <b>Projected Return on Common Equity <sup>4</sup></b>           | <b>14.19%</b>      | <b>14.56%</b> | <b>15.99%</b> |

<sup>1</sup> Dividend Yield for S&P 500 December 29, 2006  
5 Year projected growth per Merrill Lynch  
Expected future return, S&P 500

|        |
|--------|
| 1.81%  |
| 11.90% |
| 13.71% |

<sup>2</sup> Wall Street Journal December 29, 2006 data.

<sup>3</sup> The estimated betas are based on the gas and electric beta analysis.

<sup>4</sup> Due to rate regulation by the CPUC, staff has relied on recent equity rates authorized by the CPUC for Pacific Gas and Electric Co., Southern California Edison Co. and San Diego Gas and Electric Co.

**2007 Capitalization Rate Study**  
**Gas and Electric Companies**  
**Capital Asset Pricing Model - Ex Post**

| Component  | Value Line Ratings |               |               |
|--|--------------------|---------------|---------------|
|  | A++, A+            | B++, B+, B    | C++, C+       |
| Common Stock Return (1926 - 2006) <sup>1</sup>                   | 12.30%             | 12.30%        | 12.30%        |
| Less: Income-Long Term Government Bonds (1926-2006) <sup>1</sup> | 5.20%              | 5.20%         | 5.20%         |
| Risk Premium   | 7.10%              | 7.10%         | 7.10%         |
| Beta <sup>2</sup>  | 1.05               | 1.10          | 1.26          |
| Adjusted Risk Premium  | 7.48%              | 7.78%         | 8.92%         |
| Risk Free Return 25 - 30 Year Treasury Bonds <sup>3</sup>        | 4.83%              | 4.83%         | 4.83%         |
| <b>Projected Return on Common Equity<sup>4</sup></b>             | <b>12.31%</b>      | <b>12.61%</b> | <b>13.75%</b> |

<sup>1</sup> Ibbotson Associates Study.

<sup>2</sup> The estimated betas are based on the gas and electric beta analysis.

<sup>3</sup> Wall Street Journal December 29, 2006 data.

<sup>4</sup> Due to rate regulation by the CPUC, staff has relied on recent equity rates authorized by the CPUC for Pacific Gas and Electric Co., Southern California Edison Co. and San Diego Gas and Electric Co.

**2007 Capitalization Rate Study**  
**Gas and Electric Companies**  
**Equity Rates**

| a                    | b                   | c                          | d                        | e                | f                 | g                         | h                          | i                          | j                          | k                     | l                         | m                          |
|----------------------|---------------------|----------------------------|--------------------------|------------------|-------------------|---------------------------|----------------------------|----------------------------|----------------------------|-----------------------|---------------------------|----------------------------|
| Value Line<br>Rating | Company<br>Name     | Stock<br>Price<br>12/29/06 | Est.<br>2007<br>Earnings | 2006<br>Earnings | 2006<br>Dividends | Est.<br>2007<br>Dividends | Dividend<br>Yield<br>(g/c) | Est.<br>Dividend<br>Growth | Est.<br>Earnings<br>Growth | E/P<br>Ratio<br>(d/c) | DvYld+<br>DvGrth<br>(h+i) | DvYld+<br>ErngsGr<br>(h+j) |
| A++                  | Consolidated Edison | 48.07                      | 2.90                     | 2.80             | 2.30              | 2.32                      | 4.83%                      | 1.00%                      | 2.82%                      | 6.03%                 | 5.83%                     | 7.65%                      |
| A+                   | Ameren              | 53.73                      | 3.05                     | 2.80             | 2.54              | 2.54                      | 4.73%                      | Nil                        | 4.23%                      | 5.68%                 | N/A                       | 8.96%                      |
| A+                   | Exelon Corp         | 61.89                      | 5.00                     | 3.35             | 1.60              | 1.80                      | 2.91%                      | 11.00%                     | 10.96%                     | 8.08%                 | 13.91%                    | 13.87%                     |
| A+                   | FPL Group Inc       | 54.42                      | 3.40                     | 2.90             | 1.50              | 1.58                      | 2.90%                      | 5.50%                      | 7.90%                      | 6.25%                 | 8.40%                     | 10.81%                     |
| A                    | Allete              | 46.54                      | 3.15                     | 2.70             | 1.45              | 1.64                      | 3.52%                      | 9.00%                      | 8.00%                      | 6.77%                 | N/A                       | 11.52%                     |
| A                    | CH Energy Group     | 52.80                      | 2.85                     | 2.70             | 2.16              | 2.16                      | 4.09%                      | 0.50%                      | 3.00%                      | 5.40%                 | 4.59%                     | 7.09%                      |
| A                    | Great Plains Energy | 31.80                      | 2.05                     | 1.50             | 1.66              | 1.66                      | 5.22%                      | Nil                        | 1.61%                      | 6.45%                 | N/A                       | 6.83%                      |
| A                    | Hawaiian Electric   | 27.15                      | 1.55                     | 1.50             | 1.24              | 1.24                      | 4.57%                      | Nil                        | 3.86%                      | 5.71%                 | N/A                       | 8.43%                      |
| A                    | MGE Energy Inc      | 36.58                      | 2.00                     | 1.90             | 1.39              | 1.40                      | 3.83%                      | 0.50%                      | 6.00%                      | 5.47%                 | 4.33%                     | 9.83%                      |
| A                    | NStar               | 34.36                      | 2.15                     | 1.93             | 1.54              | 1.33                      | 3.87%                      | 8.00%                      | 6.61%                      | 6.26%                 | 11.87%                    | 10.48%                     |
| A                    | OGE Energy Corp     | 40.00                      | 2.30                     | 2.25             | 1.34              | 1.37                      | 3.43%                      | 2.00%                      | 5.33%                      | 5.75%                 | 5.43%                     | 8.76%                      |
| A                    | Otter Tail Corp     | 31.16                      | 1.75                     | 1.65             | 1.15              | 1.18                      | 3.79%                      | 3.00%                      | 4.63%                      | 5.62%                 | 6.79%                     | 8.42%                      |
| A                    | Scana Corp          | 40.62                      | 2.75                     | 2.65             | 1.68              | 1.72                      | 4.23%                      | 4.50%                      | 4.14%                      | 6.77%                 | 8.73%                     | 8.37%                      |
| A                    | Sempra              | 56.04                      | 3.60                     | 3.70             | 1.20              | 1.24                      | 2.21%                      | 4.50%                      | 5.53%                      | 6.42%                 | 6.71%                     | 7.75%                      |
| A                    | Southern Co         | 36.86                      | 2.20                     | 2.10             | 1.54              | 1.60                      | 4.34%                      | 4.00%                      | 4.30%                      | 5.97%                 | 8.34%                     | 8.64%                      |
| A                    | Vectren Corp        | 28.28                      | 1.80                     | 1.45             | 1.23              | 1.27                      | 4.49%                      | 3.00%                      | 3.91%                      | 6.36%                 | 7.49%                     | 8.40%                      |
|                      | Mean                |                            |                          |                  |                   |                           | 3.93%                      | 4.35%                      | 5.18%                      | 6.19%                 | 7.70%                     | 9.11%                      |
|                      | Median              |                            |                          |                  |                   |                           | 3.98%                      | 4.00%                      | 4.47%                      | 6.14%                 | 7.14%                     | 8.53%                      |
|                      | Weighted Average    |                            |                          |                  |                   |                           |                            |                            |                            |                       | 8.54%                     | 10.28%                     |

Sources: Columns a, b, d, e, f, g and i were extracted from Value Line.

Column j represents the average estimated earnings growth extracted from Value Line, Zacks.com and ThomsonFN.com.

Column c was extracted from Yahoo Finance and represents December 29, 2006 closing stock prices.

**2007 Capitalization Rate Study**  
**Gas and Electric Companies**  
**Equity Rates**

| a                    | b                    | c                          | d                        | e                | f                 | g                         | h                          | i                          | j                          | k                     | l                         | m                          |
|----------------------|----------------------|----------------------------|--------------------------|------------------|-------------------|---------------------------|----------------------------|----------------------------|----------------------------|-----------------------|---------------------------|----------------------------|
| Value Line<br>Rating | Company<br>Name      | Stock<br>Price<br>12/29/06 | Est.<br>2007<br>Earnings | 2006<br>Earnings | 2006<br>Dividends | Est.<br>2007<br>Dividends | Dividend<br>Yield<br>(g/c) | Est.<br>Dividend<br>Growth | Est.<br>Earnings<br>Growth | E/P<br>Ratio<br>(d/c) | DvYld+<br>DvGrth<br>(h+i) | DvYld+<br>ErngsGr<br>(h+j) |
| B++                  | Green Mountain Power | 33.89                      | 2.25                     | 2.10             | 1.12              | 1.18                      | 3.48%                      | 10.00%                     | 3.50%                      | 6.64%                 | 13.48%                    | 6.98%                      |
| B++                  | PG&E Corporation     | 47.33                      | 2.70                     | 2.50             | 1.34              | 1.42                      | 3.00%                      | NMF                        | 7.00%                      | 5.70%                 | N/A                       | 10.00%                     |
| B++                  | Wisconsin Energy     | 47.46                      | 2.65                     | 2.55             | 0.92              | 0.96                      | 2.02%                      | 4.50%                      | 7.37%                      | 5.58%                 | 6.52%                     | 9.39%                      |
| B+                   | DTE Energy Co        | 48.41                      | 3.65                     | 2.10             | 2.08              | 2.14                      | 4.42%                      | 2.00%                      | 4.57%                      | 7.54%                 | 6.42%                     | 8.99%                      |
| B+                   | El Paso Electric     | 24.37                      | 1.65                     | 1.30             | Nil               | Nil                       | 0.00%                      | NMF                        | 15.37%                     | 6.77%                 | N/A                       | 15.37%                     |
| B+                   | Empire District      | 24.69                      | 1.45                     | 1.15             | 1.28              | 1.28                      | 5.18%                      | Nil                        | 7.75%                      | 5.87%                 | N/A                       | 12.93%                     |
| B+                   | Northeast Utilities  | 28.16                      | 1.45                     | 1.60             | 0.73              | 0.78                      | 2.77%                      | 6.50%                      | 10.13%                     | 5.15%                 | 9.27%                     | 12.90%                     |
| B+                   | Puget Energy, Inc.   | 25.36                      | 1.60                     | 1.40             | 1.00              | 1.00                      | 3.94%                      | 1.50%                      | 4.92%                      | 6.31%                 | 5.44%                     | 8.86%                      |
| B                    | Avista Corporation   | 25.31                      | 1.50                     | 1.45             | 0.57              | 0.60                      | 2.37%                      | 12.50%                     | 7.67%                      | 5.93%                 | 14.87%                    | 10.04%                     |
| B                    | Centerpoint Energy   | 16.58                      | 1.05                     | 1.35             | 0.60              | 0.64                      | 3.86%                      | NMF                        | 8.80%                      | 6.33%                 | N/A                       | 12.66%                     |
| B                    | Central Vermont PS   | 23.55                      | 1.50                     | 1.40             | 0.92              | 0.92                      | 3.91%                      | -1.00%                     | 10.00%                     | 6.37%                 | 2.91%                     | 13.91%                     |
| B                    | DPL Inc              | 27.78                      | 1.50                     | 1.45             | 1.00              | 1.04                      | 3.74%                      | 3.50%                      | 5.49%                      | 5.40%                 | 7.24%                     | 9.23%                      |
| B                    | Duquesne Light       | 19.85                      | 1.20                     | 0.55             | 1.00              | 1.00                      | 5.04%                      | Nil                        | 5.00%                      | 6.05%                 | N/A                       | 10.04%                     |
| B                    | Edison International | 45.48                      | 3.35                     | 3.20             | 1.10              | 1.18                      | 2.59%                      | NMF                        | 7.50%                      | 7.37%                 | N/A                       | 10.09%                     |
| B                    | Sierra Pacific       | 16.83                      | 0.80                     | 1.25             | Nil               | Nil                       | 0.00%                      | NMF                        | 8.50%                      | 4.75%                 | N/A                       | 8.50%                      |
|                      | Mean                 |                            |                          |                  |                   |                           | 3.09%                      | 4.94%                      | 7.57%                      | 6.12%                 | 8.27%                     | 10.66%                     |
|                      | Median               |                            |                          |                  |                   |                           | 3.48%                      | 4.00%                      | 7.50%                      | 6.05%                 | 6.88%                     | 10.04%                     |
|                      | Weighted Average     |                            |                          |                  |                   |                           |                            |                            |                            |                       | 3.07%                     | 10.36%                     |

Sources: Columns a, b, d, e, f, g and i were extracted from Value Line.

Column j represents the average estimated earnings growth extracted from Value Line, Zacks.com and ThomsonFN.com.

Column c was extracted from Yahoo Finance and represents December 29, 2006 closing stock prices.

**2007 Capitalization Rate Study**  
**Gas and Electric Companies**  
**Equity Rates**

| a                    | b                | c                          | d                        | e                | f                 | g                         | h                          | i                          | j                          | k                     | l                         | m                          |
|----------------------|------------------|----------------------------|--------------------------|------------------|-------------------|---------------------------|----------------------------|----------------------------|----------------------------|-----------------------|---------------------------|----------------------------|
| Value Line<br>Rating | Company<br>Name  | Stock<br>Price<br>12/29/06 | Est.<br>2007<br>Earnings | 2006<br>Earnings | 2006<br>Dividends | Est.<br>2007<br>Dividends | Dividend<br>Yield<br>(g/c) | Est.<br>Dividend<br>Growth | Est.<br>Earnings<br>Growth | E/P<br>Ratio<br>(d/c) | DvYld+<br>DvGrth<br>(h+i) | DvYld+<br>ErngsGr<br>(h+j) |
| C++                  | Unisource Energy | 36.53                      | 1.85                     | 1.80             | 0.84              | 0.92                      | 2.52%                      | 9.50%                      | 8.50%                      | 5.06%                 | 12.02%                    | 11.02%                     |
| C++                  | Allegheny Energy | 45.91                      | 2.15                     | 1.80             | Nil               | 0.60                      | 0.00%                      | NMF                        | 18.62%                     | 4.68%                 | N/A                       | 18.62%                     |
|                      | Mean             |                            |                          |                  |                   |                           | 1.26%                      | 9.50%                      | 13.56%                     | 4.87%                 | 12.02%                    | 14.82%                     |
|                      | Median           |                            |                          |                  |                   |                           | 1.26%                      | 9.50%                      | 13.56%                     | 4.87%                 | 12.02%                    | 14.82%                     |
|                      | Weighted Average |                            |                          |                  |                   |                           |                            |                            |                            |                       | 1.74%                     | 17.51%                     |

Sources: Columns a, b, d, e, f, g and i were extracted from Value Line.

Column j represents the average estimated earnings growth extracted from Value Line, Zacks.com and ThomsonFN.com.

Column c was extracted from Yahoo Finance and represents December 29, 2006 closing stock prices.

**2007 Capitalization Rate Study  
Gas and Electric Companies  
Long Term Earnings Growth**

| a                    | b                    | c          | d      | e       | f       |
|----------------------|----------------------|------------|--------|---------|---------|
| Value Line<br>Rating | Company Name         | Value Line | Zacks  | Thomson | Average |
| A++                  | Consolidated Edison  | 2.00%      | 3.40%  | 3.07%   | 2.82%   |
| A+                   | Ameren               | 1.00%      | 6.10%  | 5.60%   | 4.23%   |
| A+                   | Exelon Corp          | 13.50%     | 8.70%  | 10.69%  | 10.96%  |
| A+                   | FPL Group Inc        | 8.50%      | 7.40%  | 7.81%   | 7.90%   |
| A                    | Allete               | 7.00%      | 8.50%  | 8.50%   | 8.00%   |
| A                    | CH Energy Group      | 3.00%      | N/A    | N/A     | 3.00%   |
| A                    | Great Plains Energy  | -0.50%     | 3.50%  | 1.84%   | 1.61%   |
| A                    | Hawaiian Electric    | 3.00%      | 5.20%  | 3.38%   | 3.86%   |
| A                    | MGE Energy Inc       | 6.00%      | N/A    | N/A     | 6.00%   |
| A                    | NStar                | 7.50%      | 6.00%  | 6.33%   | 6.61%   |
| A                    | OGE Energy Corp      | 4.00%      | 5.00%  | 7.00%   | 5.33%   |
| A                    | Otter Tail Corp      | 4.00%      | 4.50%  | 5.40%   | 4.63%   |
| A                    | Scana Corp           | 3.50%      | 4.50%  | 4.42%   | 4.14%   |
| A                    | Sempra Energy        | 5.50%      | 5.40%  | 5.70%   | 5.53%   |
| A                    | Southern Co          | 3.50%      | 4.40%  | 5.00%   | 4.30%   |
| A                    | Vectren Corp         | 3.00%      | 4.00%  | 4.73%   | 3.91%   |
| B++                  | Green Mountain Power | 3.50%      | N/A    | N/A     | 3.50%   |
| B++                  | PG&E Corp.           | 5.50%      | 7.80%  | 7.70%   | 7.00%   |
| B++                  | Wisconsin Energy     | 6.50%      | 7.80%  | 7.81%   | 7.37%   |
| B+                   | DTE Energy Co        | 3.00%      | 5.70%  | 5.00%   | 4.57%   |
| B+                   | El Paso Electric     | 21.50%     | 15.00% | 9.60%   | 15.37%  |
| B+                   | Empire District      | 9.50%      | N/A    | 6.00%   | 7.75%   |
| B+                   | Northeast Utilities  | 8.50%      | 10.50% | 11.40%  | 10.13%  |
| B+                   | Puget Energy, Inc.   | 5.00%      | N/A    | 4.83%   | 4.92%   |
| B                    | Avista Corporation   | 12.00%     | 5.50%  | 5.50%   | 7.67%   |
| B                    | Centerpoint Energy   | NMF        | 7.10%  | 10.50%  | 8.80%   |
| B                    | Central Vermont PS   | 10.00%     | N/A    | N/A     | 10.00%  |
| B                    | DPL Inc              | 3.50%      | 6.30%  | 6.67%   | 5.49%   |

**2007 Capitalization Rate Study  
Gas and Electric Companies  
Long Term Earnings Growth**

| a                    | b                    | c          | d      | e       | f       |
|----------------------|----------------------|------------|--------|---------|---------|
| Value Line<br>Rating | Company Name         | Value Line | Zacks  | Thomson | Average |
| B                    | Duquesne Light       | 5.00%      | N/A    | N/A     | 5.00%   |
| B                    | Edison International | 8.00%      | 8.00%  | 6.50%   | 7.50%   |
| B                    | Sierra Pacific       | NMF        | 15.00% | 15.00%  | 15.00%  |
| C++                  | Unisource Energy     | 7.00%      | 10.00% | N/A     | 8.50%   |
| C++                  | Allegheny Energy     | NMF        | 15.90% | 21.33%  | 18.62%  |
|                      | Mean                 | 6.10%      | 7.35%  | 7.31%   | 6.97%   |
|                      | Median               | 5.25%      | 6.20%  | 6.33%   | 6.00%   |

Sources: Columns a, b, c were extracted from the November/December, 2006 Value Line.  
Column d was extracted from Zacks Investment Research, Inc.  
Column e was extracted from Thomson Network.



**2007 Capitalization Rate Study  
Gas and Electric Companies  
Capital Structure**

| a                    | b                   | c                              | d                                 | e                                   | f                            | g                            | h                                | i                                | j                 | k                 | l                     | m                       |
|----------------------|---------------------|--------------------------------|-----------------------------------|-------------------------------------|------------------------------|------------------------------|----------------------------------|----------------------------------|-------------------|-------------------|-----------------------|-------------------------|
| Value Line<br>Rating | Company<br>Name     | Common<br>Stock<br>Outstanding | Common<br>Stock Price<br>12/29/06 | Mkt Value<br>Equity<br>(\$millions) | L.T.<br>Debt<br>(\$millions) | Pfd<br>Stock<br>(\$millions) | Common<br>Equity<br>(\$millions) | Total<br>Capital<br>(\$millions) | L.T.<br>Debt<br>% | Pfd<br>Stock<br>% | Common<br>Equity<br>% | Debt<br>Equity<br>Ratio |
| A++                  | Consolidated Edison | 246,466,627                    | 48.07                             | 11,847.65                           | 8,063.00                     | 212.60                       | 11,847.65                        | 20,123.25                        | 40.1%             | 1.1%              | 58.9%                 | 0.67                    |
| A+                   | Ameren              | 206,262,150                    | 53.73                             | 11,082.47                           | 5,349.00                     | 213.00                       | 11,082.47                        | 16,644.47                        | 32.1%             | 1.3%              | 66.6%                 | 0.47                    |
| A+                   | Exelon Corp         | 670,954,514                    | 61.89                             | 41,525.37                           | 11,575.00                    | 87.00                        | 41,525.37                        | 53,187.37                        | 21.8%             | 0.2%              | 78.1%                 | 0.28                    |
| A+                   | FPL Group Inc       | 404,746,671                    | 54.42                             | 22,026.31                           | 9,631.00                     | 0.00                         | 22,026.31                        | 31,657.31                        | 30.4%             | 0.0%              | 69.6%                 | 0.44                    |
| A                    | Allete              | 30,381,209                     | 46.54                             | 1,413.94                            | 385.20                       | 0.00                         | 1,413.94                         | 1,799.14                         | 21.4%             | 0.0%              | 78.6%                 | 0.27                    |
| A                    | CH Energy Group     | 15,762,000                     | 52.80                             | 832.23                              | 310.90                       | 21.00                        | 832.23                           | 1,164.13                         | 26.7%             | 1.8%              | 71.5%                 | 0.36                    |
| A                    | Great Plains Energy | 80,303,446                     | 31.80                             | 2,553.65                            | 752.30                       | 39.00                        | 2,553.65                         | 3,344.95                         | 22.5%             | 1.2%              | 76.3%                 | 0.29                    |
| A                    | Hawaiian Electric   | 81,284,371                     | 27.15                             | 2,206.87                            | 1,033.00                     | 34.30                        | 2,206.87                         | 3,274.17                         | 31.5%             | 1.0%              | 67.4%                 | 0.46                    |
| A                    | MGE Energy Inc      | 20,670,572                     | 36.58                             | 756.13                              | 207.40                       | 0.00                         | 756.13                           | 963.53                           | 21.5%             | 0.0%              | 78.5%                 | 0.27                    |
| A                    | NStar               | 106,808,376                    | 34.36                             | 3,669.94                            | 2,361.60                     | 43.00                        | 3,669.94                         | 6,074.54                         | 38.9%             | 0.7%              | 60.4%                 | 0.64                    |
| A                    | OGE Energy Corp     | 91,139,901                     | 40.00                             | 3,645.60                            | 1,221.50                     | 0.00                         | 3,645.60                         | 4,867.10                         | 25.1%             | 0.0%              | 74.9%                 | 0.34                    |
| A                    | Otter Tail Corp     | 29,505,159                     | 31.16                             | 919.38                              | 256.20                       | 15.50                        | 919.38                           | 1,191.08                         | 21.5%             | 1.3%              | 77.2%                 | 0.27                    |
| A                    | Scana Corp          | 116,006,325                    | 40.62                             | 4,712.18                            | 3,043.00                     | 114.00                       | 4,712.18                         | 7,869.18                         | 38.7%             | 1.4%              | 59.9%                 | 0.63                    |
| A                    | Sempra              | 261,213,630                    | 56.04                             | 14,638.41                           | 4,414.00                     | 195.00                       | 14,638.41                        | 19,247.41                        | 22.9%             | 1.0%              | 76.1%                 | 0.30                    |
| A                    | Southern Co         | 742,286,154                    | 36.86                             | 27,360.67                           | 13,190.00                    | 595.60                       | 27,360.67                        | 41,146.27                        | 32.1%             | 1.4%              | 66.5%                 | 0.47                    |
| A                    | Vectren Corp        | 76,201,571                     | 28.28                             | 2,154.98                            | 1,251.80                     | 0.00                         | 2,154.98                         | 3,406.78                         | 36.7%             | 0.0%              | 63.3%                 | 0.58                    |
|                      | Mean                |                                |                                   |                                     |                              |                              |                                  |                                  | 29.0%             | 0.8%              | 70.2%                 | 0.42                    |
|                      | Median              |                                |                                   |                                     |                              |                              |                                  |                                  | 28.6%             | 1.0%              | 70.5%                 |                         |
|                      | Weighted Average    |                                |                                   |                                     |                              |                              |                                  |                                  | 29.2%             | 0.7%              | 70.1%                 |                         |

Sources: Columns a, b, c, f and g were extracted from Value Line.

Column d was extracted from Yahoo Finance and represents December 29, 2006 closing stock prices.

**2007 Capitalization Rate Study  
Gas and Electric Companies  
Capital Structure**

| a                    | b                    | c                              | d                                 | e                                   | f                            | g                            | h                                | i                                | j                 | k                 | l                     | m                       |
|----------------------|----------------------|--------------------------------|-----------------------------------|-------------------------------------|------------------------------|------------------------------|----------------------------------|----------------------------------|-------------------|-------------------|-----------------------|-------------------------|
| Value Line<br>Rating | Company Name         | Common<br>Stock<br>Outstanding | Common<br>Stock Price<br>12/29/06 | Mkt Value<br>Equity<br>(\$millions) | L.T.<br>Debt<br>(\$millions) | Pfd<br>Stock<br>(\$millions) | Common<br>Equity<br>(\$millions) | Total<br>Capital<br>(\$millions) | L.T.<br>Debt<br>% | Pfd<br>Stock<br>% | Common<br>Equity<br>% | Debt<br>Equity<br>Ratio |
| B++                  | Green Mountain       | 5,294,461                      | 33.89                             | 179.43                              | 93.90                        | 0.00                         | 179.43                           | 273.33                           | 34.4%             | 0.0%              | 65.6%                 | 0.52                    |
| B++                  | PG&E                 | 372,731,269                    | 47.33                             | 17,641.37                           | 6,696.00                     | 252.00                       | 17,641.37                        | 24,589.37                        | 27.2%             | 1.0%              | 71.7%                 | 0.37                    |
| B++                  | Wisconsin Energy     | 116,978,883                    | 47.46                             | 5,551.82                            | 3,034.80                     | 30.40                        | 5,551.82                         | 8,617.02                         | 35.2%             | 0.4%              | 64.4%                 | 0.54                    |
| B+                   | DTE Energy Co        | 177,964,872                    | 48.41                             | 8,615.28                            | 7,282.00                     | 0.00                         | 8,615.28                         | 15,897.28                        | 45.8%             | 0.0%              | 54.2%                 | 0.85                    |
| B+                   | El Paso Electric     | 48,457,840                     | 24.37                             | 1,180.92                            | 612.30                       | 0.00                         | 1,180.92                         | 1,793.22                         | 34.1%             | 0.0%              | 65.9%                 | 0.52                    |
| B+                   | Empire District      | 30,190,017                     | 24.69                             | 745.39                              | 462.60                       | 0.00                         | 745.39                           | 1,207.99                         | 38.3%             | 0.0%              | 61.7%                 | 0.62                    |
| B+                   | Northeast Utilities  | 153,798,675                    | 28.16                             | 4,330.97                            | 2,945.00                     | 116.20                       | 4,330.97                         | 7,392.17                         | 39.8%             | 1.6%              | 58.6%                 | 0.66                    |
| B+                   | Puget Energy, Inc.   | 116,241,200                    | 25.36                             | 2,947.88                            | 2,371.10                     | 1.90                         | 2,947.88                         | 5,320.88                         | 44.6%             | 0.0%              | 55.4%                 | 0.80                    |
| B                    | Avista Corporation   | 49,082,419                     | 25.31                             | 1,242.28                            | 933.80                       | 26.30                        | 1,242.28                         | 2,202.38                         | 42.4%             | 1.2%              | 56.4%                 | 0.74                    |
| B                    | Centerpoint Energy   | 312,839,095                    | 16.58                             | 5,186.87                            | 7,905.00                     | 0.00                         | 5,186.87                         | 13,091.87                        | 60.4%             | 0.0%              | 39.6%                 | 1.52                    |
| B                    | Central Vermont PS   | 10,091,097                     | 23.55                             | 237.65                              | 121.80                       | 11.10                        | 237.65                           | 370.55                           | 32.9%             | 3.0%              | 64.1%                 | 0.49                    |
| B                    | DPL Inc              | 112,673,972                    | 27.78                             | 3,130.08                            | 1,551.90                     | 22.90                        | 3,130.08                         | 4,704.88                         | 33.0%             | 0.5%              | 66.5%                 | 0.49                    |
| B                    | Duquesne Light       | 87,612,654                     | 19.85                             | 1,739.11                            | 1,557.70                     | 148.20                       | 1,739.11                         | 3,445.01                         | 45.2%             | 4.3%              | 50.5%                 | 0.83                    |
| B                    | Edison International | 325,811,206                    | 45.48                             | 14,817.89                           | 9,232.00                     | 915.00                       | 14,817.89                        | 24,964.89                        | 37.0%             | 3.7%              | 59.4%                 | 0.59                    |
| B                    | Sierra Pacific       | 200,921,764                    | 16.83                             | 3,381.51                            | 4,403.70                     | 0.00                         | 3,381.51                         | 7,785.21                         | 56.6%             | 0.0%              | 43.4%                 | 1.30                    |
|                      | Mean                 |                                |                                   |                                     |                              |                              |                                  |                                  | 40.5%             | 1.0%              | 58.5%                 | 0.72                    |
|                      | Median               |                                |                                   |                                     |                              |                              |                                  |                                  | 38.3%             | 0.4%              | 59.4%                 |                         |
|                      | Weighted Average     |                                |                                   |                                     |                              |                              |                                  |                                  | 40.44%            | 1.25%             | 58.30%                |                         |

Sources: Columns a, b, c, f and g were extracted from Value Line.  
Column d was extracted from Yahoo Finance and represents December 29, 2006 closing stock prices.

**2007 Capitalization Rate Study  
Gas and Electric Companies  
Capital Structure**

| a                    | b                | c                              | d                                 | e                                   | f                            | g                            | h                                | i                                | j                 | k                 | l                     | m                       |
|----------------------|------------------|--------------------------------|-----------------------------------|-------------------------------------|------------------------------|------------------------------|----------------------------------|----------------------------------|-------------------|-------------------|-----------------------|-------------------------|
| Value Line<br>Rating | Company<br>Name  | Common<br>Stock<br>Outstanding | Common<br>Stock Price<br>12/29/06 | Mkt Value<br>Equity<br>(\$millions) | L.T.<br>Debt<br>(\$millions) | Pfd<br>Stock<br>(\$millions) | Common<br>Equity<br>(\$millions) | Total<br>Capital<br>(\$millions) | L.T.<br>Debt<br>% | Pfd<br>Stock<br>% | Common<br>Equity<br>% | Debt<br>Equity<br>Ratio |
| C++                  | Unisource Energy | 35,162,573                     | 36.53                             | 1,284.49                            | 1,835.80                     | 0.00                         | 1,284.49                         | 3,120.29                         | 58.8%             | 0.0%              | 41.2%                 | 1.43                    |
| C++                  | Allegheny Energy | 165,238,004                    | 45.91                             | 7,586.08                            | 3,426.00                     | 24.00                        | 7,586.08                         | 11,036.08                        | 31.0%             | 0.2%              | 68.7%                 | 0.45                    |
|                      | Mean             |                                |                                   |                                     |                              |                              |                                  |                                  | 44.9%             | 0.1%              | 55.0%                 | 0.94                    |
|                      | Median           |                                |                                   |                                     |                              |                              |                                  |                                  | 44.9%             | 0.1%              | 55.0%                 |                         |
|                      | Weighted Average |                                |                                   |                                     |                              |                              |                                  |                                  | 37.2%             | 0.2%              | 62.6%                 |                         |

Sources: Columns a, b, c, f and g were extracted from Value Line.  
Column d was extracted from Yahoo Finance and represents December 29, 2006 closing stock prices.

**2007 Capitalization Rate Study  
Gas and Electric Companies  
Beta Analysis**

| a                    | b   | c                     | d             | e                            | f               | g                       | h                              | i                               |
|----------------------|---|-----------------------|---------------|------------------------------|-----------------|-------------------------|--------------------------------|---------------------------------|
| Value Line<br>Rating | Company Name  | Value<br>Line<br>Beta | Zacks<br>Beta | Standard<br>& Poor's<br>Beta | Average<br>Beta | Debt<br>Equity<br>Ratio | Unlevered<br>Beta <sup>1</sup> | WTG Avg<br>Debt/Equity<br>Ratio |
| A++                  | Consolidated Edison   | 0.75                  | 0.17          | 0.11                         | 0.34            | 0.67                    | 0.54                           | 0.06                            |
| A+                   | Ameren  | 0.75                  | 0.34          | 0.36                         | 0.48            | 0.47                    | 0.58                           | 0.04                            |
| A+                   | Exelon Corp   | 0.90                  | 0.29          | 0.30                         | 0.50            | 0.28                    | 0.77                           | 0.07                            |
| A+                   | FPL Group Inc   | 0.85                  | 0.52          | 0.47                         | 0.61            | 0.44                    | 0.67                           | 0.06                            |
| A                    | Allete  | 0.90                  | 0.91          | N/A                          | 0.91            | 0.27                    | N/A                            | 0.00                            |
| A                    | CH Energy Group   | 0.85                  | 0.35          | 0.37                         | 0.52            | 0.36                    | 0.70                           | 0.00                            |
| A                    | GT Plains Energy  | 0.95                  | 0.87          | 0.77                         | 0.86            | 0.29                    | 0.81                           | 0.00                            |
| A                    | Hawaiian Electric   | 0.70                  | 0.38          | N/A                          | 0.54            | 0.46                    | 0.55                           | 0.01                            |
| A                    | MGE Energy Inc  | 0.75                  | 0.53          | 0.53                         | 0.60            | 0.27                    | 0.64                           | 0.00                            |
| A                    | OGE Energy Corp   | 0.75                  | 0.55          | N/A                          | 0.65            | 0.64                    | 0.54                           | 0.02                            |
| A                    | NStar   | 0.80                  | 0.49          | 0.50                         | 0.60            | 0.34                    | 0.67                           | 0.01                            |
| A                    | Otter Tail Corp   | 0.65                  | 0.48          | N/A                          | 0.57            | 0.27                    | 0.56                           | 0.00                            |
| A                    | Scana Corp  | 0.85                  | 0.48          | 0.52                         | 0.62            | 0.63                    | 0.62                           | 0.02                            |
| A                    | Sempra  | 1.10                  | 0.87          | 0.80                         | 0.92            | 0.30                    | 0.93                           | 0.03                            |
| A                    | Southern Co   | 0.70                  | -0.03         | -0.10                        | 0.19            | 0.47                    | 0.55                           | 0.09                            |
| A                    | Vectren Corp  | 0.90                  | 0.51          | N/A                          | 0.71            | 0.58                    | 0.67                           | 0.01                            |
|                      | Mean  | 0.82                  | 0.48          | 0.42                         | 0.60            | 0.42                    | 0.65                           | 0.03                            |
|                      | Median  | 0.83                  | 0.49          | 0.47                         | 0.60            | 0.40                    | 0.64                           |                                 |
|                      | Weighted  |                       |               |                              | 0.50            |                         | 0.66                           |                                 |
|                      | Relevered Beta based on 50% Debt Capital Structure and mean Unlevered Beta <sup>2</sup>               |                       |               |                              |                 |                         |                                | 1.04                            |
|                      | Relevered Beta based on 50% Debt Capital Structure and a weighted average Unlevered Beta <sup>2</sup> |                       |               |                              |                 |                         |                                | 1.06                            |

Sources: Columns a, b and c were extracted from Value Line.  
Column d was extracted from Zacks.com.  
Column e was extracted from Standard and Poor's Stock Reports.  
Column g was extracted from capital structure worksheet.

<sup>1</sup> Unlevered Beta = Beta/[1+(1-t)(D/E)]; where D/E is the debt to equity ratio, t is the tax rate (assumed to be 40%)

<sup>2</sup> Relevered Beta = [Unlevered Beta][1+(1-t)(D/E)]; where D/E is the debt to equity ratio, t is the tax rate (assumed to be 40%)

**2007 Capitalization Rate Study  
Gas and Electric Companies  
Beta Analysis**

| a      | b   | c                     | d             | e                            | f               | g                       | h                              | i                               |
|--------|---|-----------------------|---------------|------------------------------|-----------------|-------------------------|--------------------------------|---------------------------------|
| Rating | Company Name  | Value<br>Line<br>Beta | Zacks<br>Beta | Standard<br>& Poor's<br>Beta | Average<br>Beta | Debt<br>Equity<br>Ratio | Unlevered<br>Beta <sup>1</sup> | WTG Avg<br>Debt/Equity<br>Ratio |
| B++    | Green Mountain Power  | 0.60                  | 0.18          | 0.25                         | 0.34            | 0.52                    | 0.46                           | 0.00                            |
| B++    | PG&E Corporation  | 1.15                  | 1.01          | 0.97                         | 1.04            | 0.37                    | 0.94                           | 0.18                            |
| B++    | Wisconsin Energy  | 0.80                  | 0.19          | 0.14                         | 0.38            | 0.54                    | 0.60                           | 0.09                            |
| B+     | DTE Energy Co   | 0.75                  | 0.51          | 0.45                         | 0.57            | 0.85                    | 0.50                           | 0.26                            |
| B+     | El Paso Electric  | 0.70                  | 0.25          | 0.22                         | 0.39            | 0.52                    | 0.53                           | 0.02                            |
| B+     | Empire District   | 0.80                  | 0.68          | N/A                          | 0.74            | 0.62                    | 0.58                           | 0.01                            |
| B+     | Northeast Utilities   | 0.90                  | 0.44          | 0.34                         | 0.56            | 0.66                    | 0.64                           | 0.10                            |
| B+     | Puget Energy, Inc.  | 0.80                  | 0.33          | 0.32                         | 0.48            | 0.80                    | 0.54                           | 0.08                            |
| B      | Avista Corporation  | 0.95                  | 0.60          | N/A                          | 0.78            | 0.74                    | 0.66                           | 0.03                            |
| B      | Centerpoint Energy  | 0.65                  | 1.21          | 1.05                         | 0.97            | 0.00                    | 0.65                           | 0.00                            |
| B      | Central Vermont PS  | 0.70                  | 0.42          | N/A                          | 0.56            | 0.00                    | 0.70                           | 0.00                            |
| B      | DPL Inc   | 0.95                  | 0.93          | 0.86                         | 0.91            | 0.49                    | 0.73                           | 0.05                            |
| B      | Duquesne Light  | 1.00                  | 0.84          | 0.77                         | 0.87            | 0.83                    | 0.67                           | 0.06                            |
| B      | Edison International  | 1.15                  | 0.82          | 0.81                         | 0.93            | 0.59                    | 0.85                           | 0.29                            |
| B      | Sierra Pacific  | 1.15                  | 2.00          | 1.87                         | 1.67            | 1.30                    | 0.65                           | 0.20                            |
|        |   |                       |               |                              |                 |                         |                                |                                 |
|        | Mean  | 0.87                  | 0.69          | 0.67                         | 0.75            | 0.59                    | 0.65                           | 0.09                            |
|        | Median  | 0.80                  | 0.60          | 0.61                         | 0.74            | 0.59                    | 0.65                           |                                 |
|        | Weighted  |                       |               |                              | 0.86            |                         | 0.72                           |                                 |
|        |   |                       |               |                              |                 |                         |                                |                                 |
|        | Relevered Beta based on 50% Debt Capital Structure and mean Unlevered Beta <sup>2</sup>               |                       |               |                              |                 |                         |                                | 1.04                            |
|        | Relevered Beta based on 50% Debt Capital Structure and a weighted average Unlevered Beta <sup>2</sup> |                       |               |                              |                 |                         |                                | 1.16                            |

Sources: Columns a, b and c were extracted from Value Line.

Column d was extracted from Zacks.com.

Column e was extracted from Standard and Poor's Stock Reports.

Column g was extracted from capital structure worksheet.

<sup>1</sup> Unlevered Beta = Beta/[1+(1-t)(D/E)]; where D/E is the debt to equity ratio, t is the tax rate (assumed to be 40%)

<sup>2</sup> Relevered Beta = [Unlevered Beta][1+(1-t)(D/E)]; where D/E is the debt to equity ratio, t is the tax rate (assumed to be 40%)

**2007 Capitalization Rate Study  
Gas and Electric Companies  
Beta Analysis**

| a                    | b   | c                     | d             | e                            | f               | g                       | h                              | i                               |
|----------------------|---|-----------------------|---------------|------------------------------|-----------------|-------------------------|--------------------------------|---------------------------------|
| Value Line<br>Rating | Company Name  | Value<br>Line<br>Beta | Zacks<br>Beta | Standard<br>& Poor's<br>Beta | Average<br>Beta | Debt<br>Equity<br>Ratio | Unlevered<br>Beta <sup>1</sup> | WTG Avg<br>Debt/Equity<br>Ratio |
| C++                  | Unisource Energy  | 0.75                  | 0.54          | 0.54                         | 0.61            | 1.43                    | 0.40                           | 0.32                            |
| C++                  | Allegheny Energy  | 2.10                  | 1.29          | 1.19                         | 1.53            | 0.45                    | 1.00                           | 0.35                            |
|                      | Mean  | 1.43                  | 0.92          | 0.87                         | 1.07            | 0.94                    | 0.70                           | 0.33                            |
|                      | Median  | 1.43                  | 0.92          | 0.87                         | 1.07            | 0.94                    | 0.70                           |                                 |
|                      | Weighted  |                       |               |                              | 1.32            |                         | 0.87                           |                                 |
|                      | Relevered Beta based on 50% Debt Capital Structure and mean Unlevered Beta <sup>2</sup>               |                       |               |                              |                 |                         |                                | 1.12                            |
|                      | Relevered Beta based on 50% Debt Capital Structure and a weighted average Unlevered Beta <sup>2</sup> |                       |               |                              |                 |                         |                                | 1.39                            |

Sources: Columns a, b and c were extracted from Value Line.

Column d was extracted from Zacks.com.

Column e was extracted from Standard and Poor's Stock Reports.

Column g was extracted from capital structure worksheet.

<sup>1</sup> Unlevered Beta = Beta/[1+(1-t)(D/E)]; where D/E is the debt to equity ratio, t is the tax rate (assumed to be 40%)

<sup>2</sup> Relevered Beta = [Unlevered Beta][1+(1-t)(D/E)]; where D/E is the debt to equity ratio, t is the tax rate (assumed to be 40%)

**2007 Capitalization Rate Study  
Natural Gas Distribution Companies  
Flotation Cost Adjustment**

| Equity               |                     |                        |                  | Preferred Stock   |                     |                        |                  | Debt              |                     |                        |                  |
|----------------------|---------------------|------------------------|------------------|-------------------|---------------------|------------------------|------------------|-------------------|---------------------|------------------------|------------------|
| Value Line<br>Rating | Recommended<br>Rate | Flotation<br>Cost in % | Adjusted<br>Rate | Moody's<br>Rating | Recommended<br>Rate | Flotation<br>Cost in % | Adjusted<br>Rate | Moody's<br>Rating | Recommended<br>Rate | Flotation<br>Cost in % | Adjusted<br>Rate |
| A, B++               | 11.12%              | 4.50%                  | 11.64%           | baa1              | 6.34%               | 1.70%                  | 6.45%            | A1                | 5.88%               | 1.70%                  | 5.99%            |
| B+, B                | 11.35%              | 4.50%                  | 11.88%           | baa3              | 6.42%               | 1.70%                  | 6.53%            | A2                | 5.95%               | 1.70%                  | 6.05%            |
| NR                   | 12.16%              | 4.50%                  | 12.73%           |                   |                     |                        |                  | Baa2              | 6.18%               | 1.70%                  | 6.29%            |
|                      |                     |                        |                  |                   |                     |                        |                  | NR                | 7.03%               | 1.70%                  | 7.15%            |

$$\text{Cost of Capital Adjusted for Flotation Costs} = \frac{k_u}{1 - f}$$

Where:  $k_u$  = The cost of capital unadjusted for flotation costs

$f$  = Flotation cost as a percentage of the value of securities issued

**2007 Capitalization Rate Study  
Natural Gas Distribution Companies  
Summary of Rates of Return**

| Common Equity        |                                | Preferred Stock       |                 |                                | Bonds                  |                 |                                |
|----------------------|--------------------------------|-----------------------|-----------------|--------------------------------|------------------------|-----------------|--------------------------------|
| Value Line<br>Rating | Rate of<br>Return <sup>1</sup> | Moody's P/S<br>Yields | Moody<br>Rating | Rate of<br>Return <sup>2</sup> | Moody's Bond<br>Yields | Moody<br>Rating | Rate of<br>Return <sup>2</sup> |
| A, B++               | 11.12%                         | aa=N/A                | aa1             | 6.22%                          | Aaa=N/A                | Aaa2            | 5.54%                          |
|                      |                                |                       | aa2             | 6.23%                          |                        | Aaa3            | 5.61%                          |
|                      |                                |                       | aa3             | 6.23%                          |                        | Aa1             | 5.68%                          |
| B+, B                | 11.35%                         | a=6.27%               | a1              | 6.25%                          | Aa=5.75%               | Aa              | 5.75%                          |
|                      |                                |                       | a2              | 6.27%                          |                        | Aa3             | 5.82%                          |
|                      |                                |                       | a3              | 6.31%                          |                        | A1              | 5.88%                          |
| NR <sup>3</sup>      | 12.16%                         | baa=6.38%             | baa1            | 6.34%                          | A=5.95%                | A2              | 5.95%                          |
|                      |                                |                       | baa2            | 6.38%                          |                        | A3              | 6.03%                          |
|                      |                                |                       | baa3            | 6.42%                          |                        | Baa1            | 6.10%                          |
|                      |                                |                       | ba1             | 6.45%                          | Baa=6.18%              | Baa             | 6.18%                          |
|                      |                                |                       | ba2             | 6.49%                          |                        | Baa3            | 6.29%                          |
|                      |                                |                       | ba3             | 6.53%                          |                        | Ba1             | 6.39%                          |
|                      |                                |                       | b1              | 6.56%                          |                        | Ba2             | 6.50%                          |
|                      |                                |                       | b2              | 6.60%                          |                        | Ba3             | 6.61%                          |
|                      |                                |                       | b3              | 6.64%                          |                        | B1              | 6.71%                          |
|                      |                                |                       | caa1            | 6.67%                          |                        | B2              | 6.82%                          |
|                      |                                |                       | caa3            | 6.71%                          |                        | B3              | 6.93%                          |
|                      |                                |                       |                 |                                |                        | NR              | 7.03%                          |

<sup>1</sup>The Rate of Return on Common Equity was developed by staff based on the relative risk of the utilities in conjunction with the results of the various financial models and pertinent information from various sources.

<sup>2</sup> Rates of Return on Preferred Stocks and Bonds were based on Moody's "Utility Preferred Stock Yields" and "Utility Bond Yields", December 2006 report. Because Moody assigns a yield to the groups Aaa, Aa, A and Baa for bonds; and aa, a, and baa for preferred stocks, the staff interpolates the difference between these groups in order to achieve a further refinement of the ratings.

<sup>3</sup> For companies whose common equity are not rated (NR), staff judgment is used in assigning the rates of return because the circumstances or reasons for not rating the common equity are different for each company.



**2007 Capitalization Rate Study**  
**Natural Gas Distribution Companies**  
**Capital Asset Pricing Model - Ex Ante**

| Component   | Value Line Ratings |               |               |               |
|---|--------------------|---------------|---------------|---------------|
|   | A                  | B++           | B+            | B             |
| Expected Future Return, S&P 500                                 | 13.71%             | 13.71%        | 13.71%        | 13.71%        |
| Less: Risk Free Return 25 - 30 Year Treasury Bonds <sup>1</sup> | 4.83%              | 4.83%         | 4.83%         | 4.83%         |
| Risk Premium  | 8.88%              | 8.88%         | 8.88%         | 8.88%         |
| Beta <sup>2</sup>   | 0.88               | 0.88          | 1.05          | 1.05          |
| Adjusted Risk Premium   | 7.81%              | 7.81%         | 9.34%         | 9.34%         |
| Risk Free Return 25 - 30 Year Treasury Bonds <sup>1</sup>       | 4.83%              | 4.83%         | 4.83%         | 4.83%         |
| <b>Projected Return on Common Equity</b>                        | <b>12.64%</b>      | <b>12.64%</b> | <b>14.17%</b> | <b>14.17%</b> |

<sup>1</sup> Wall Street Journal December 29, 2006 data.

<sup>2</sup> The estimated betas are based on the gas and electric beta analysis. Staff is placing greater reliance on Value Line's mean beta.

**2007 Capitalization Rate Study**  
**Natural Gas Distribution Companies**  
**Capital Asset Pricing Model - Ex Post**

| Component  | Value Line Ratings |               |               |               |
|--|--------------------|---------------|---------------|---------------|
|  | A                  | B++           | B+            | B             |
| Common Stock Return (1926 - 2006) <sup>1</sup>                   | 12.30%             | 12.30%        | 12.30%        | 12.30%        |
| Less: Income-Long Term Government Bonds (1926-2006) <sup>1</sup> | 5.20%              | 5.20%         | 5.20%         | 5.20%         |
| Risk Premium   | 7.10%              | 7.10%         | 7.10%         | 7.10%         |
| Beta <sup>2</sup>  | 0.88               | 0.88          | 1.05          | 1.05          |
| Adjusted Risk Premium  | 6.25%              | 6.25%         | 7.47%         | 7.47%         |
| Risk Free Return 25 - 30 Year Treasury Bonds <sup>3</sup>        | 4.83%              | 4.83%         | 4.83%         | 4.83%         |
| <b>Projected Return on Common Equity</b>                         | <b>11.08%</b>      | <b>11.08%</b> | <b>12.30%</b> | <b>12.30%</b> |

<sup>1</sup> Ibbotson Associates Study.

<sup>2</sup> The estimated betas are based on the gas and electric beta analysis. Staff is placing greater reliance on Value Line's mean beta.

<sup>3</sup> Wall Street Journal December 29, 2006 data.

**2007 Capitalization Rate Study  
Natural Gas Distribution Companies  
Equity Rates**

| a                    | b                         | c                          | d                        | e                | f                 | g                         | h                          | i                          | j                          | k                     | l                         | m                          |
|----------------------|---------------------------|----------------------------|--------------------------|------------------|-------------------|---------------------------|----------------------------|----------------------------|----------------------------|-----------------------|---------------------------|----------------------------|
| Value Line<br>Rating | Company<br>Name           | Stock<br>Price<br>12/29/06 | Est.<br>2007<br>Earnings | 2006<br>Earnings | 2006<br>Dividends | Est.<br>2007<br>Dividends | Dividend<br>Yield<br>(g/c) | Est.<br>Dividend<br>Growth | Est.<br>Earnings<br>Growth | E/P<br>Ratio<br>(d/c) | DvYld+<br>DvGrth<br>(h+i) | DvYld+<br>ErngsGr<br>(h+j) |
| A                    | Energen Corp.             | 46.94                      | 4.00                     | 3.15             | 0.44              | 0.48                      | 1.02%                      | 8.00%                      | 7.06%                      | 8.52%                 | 1.02%                     | 8.08%                      |
| A                    | Nicor Inc                 | 46.80                      | 2.72                     | 2.70             | 1.86              | 1.90                      | 4.06%                      | 1.00%                      | 3.29%                      | 5.81%                 | 5.06%                     | 7.35%                      |
| A                    | New Jersey Resources      | 48.58                      | 2.90                     | 2.80             | 1.44              | 1.52                      | 3.13%                      | 4.50%                      | 5.39%                      | 5.97%                 | 7.63%                     | 8.52%                      |
| A                    | Northwest Natural Gas Co. | 42.44                      | 2.40                     | 2.25             | 1.39              | 1.43                      | 3.37%                      | 4.00%                      | 5.73%                      | 5.66%                 | 7.37%                     | 9.10%                      |
| A                    | WGL Holdings              | 32.58                      | 1.90                     | 1.90             | 1.35              | 1.38                      | 4.24%                      | 2.00%                      | 2.71%                      | 5.83%                 | 6.24%                     | 6.95%                      |
| B++                  | AGL Resources             | 38.91                      | 2.70                     | 2.65             | 1.50              | 1.58                      | 4.06%                      | 6.50%                      | 4.27%                      | 6.94%                 | 10.56%                    | 8.33%                      |
| B++                  | Keyspan                   | 41.18                      | 2.40                     | 2.35             | 1.86              | 1.90                      | 4.61%                      | 2.50%                      | 2.48%                      | 5.83%                 | 4.61%                     | 7.10%                      |
| B++                  | Peoples Energy            | 44.57                      | 1.40                     | 1.13             | 2.18              | 2.18                      | 4.89%                      | Nil                        | 5.25%                      | 3.14%                 | N/A                       | 10.14%                     |
| B++                  | Piedmont Natural Gas      | 26.75                      | 1.40                     | 1.30             | 0.96              | 1.00                      | 3.74%                      | 5.50%                      | 5.25%                      | 5.23%                 | 9.24%                     | 8.99%                      |
| B++                  | South Jersey Industries   | 33.41                      | 1.95                     | 1.85             | 0.92              | 0.98                      | 2.93%                      | 6.00%                      | 6.44%                      | 5.84%                 | 8.93%                     | 9.38%                      |
|                      | Mean                      |                            |                          |                  |                   |                           | 3.61%                      | 4.44%                      | 4.79%                      | 5.88%                 | 6.74%                     | 8.39%                      |
|                      | Median                    |                            |                          |                  |                   |                           | 3.90%                      | 4.50%                      | 5.25%                      | 5.83%                 | 7.37%                     | 8.42%                      |
|                      | Weighted Average          |                            |                          |                  |                   |                           |                            |                            |                            |                       | 5.52%                     | 8.03%                      |

Sources: Columns a, b, d, e, f and g were extracted from the December 15, 2006 Value Line.

Column j represents the average estimated earnings growth extracted from Value Line, Zacks.com and ThomsonFN.com.

Column c was extracted from Yahoo Finance and represents December 29, 2006 closing stock prices.

**2007 Capitalization Rate Study**  
**Natural Gas Distribution Companies**  
**Equity Rates**

| a                    | b                   | c                          | d                        | e                | f                 | g                         | h                          | i                          | j                          | k                     | l                         | m                          |
|----------------------|---------------------|----------------------------|--------------------------|------------------|-------------------|---------------------------|----------------------------|----------------------------|----------------------------|-----------------------|---------------------------|----------------------------|
| Value Line<br>Rating | Company<br>Name     | Stock<br>Price<br>12/29/06 | Est.<br>2007<br>Earnings | 2006<br>Earnings | 2006<br>Dividends | Est.<br>2007<br>Dividends | Dividend<br>Yield<br>(g/c) | Est.<br>Dividend<br>Growth | Est.<br>Earnings<br>Growth | E/P<br>Ratio<br>(d/c) | DvYld+<br>DvGrth<br>(h+i) | DvYld+<br>ErngsGr<br>(h+j) |
| B+                   | Atmos Energy Corp.  | 31.91                      | 1.95                     | 2.00             | 1.26              | 1.28                      | 4.01%                      | 2.00%                      | 6.05%                      | 6.11%                 | 6.01%                     | 10.06%                     |
| B+                   | Cascade Natural Gas | 25.92                      | 1.15                     | 1.09             | 0.96              | 0.96                      | 3.70%                      | 0.50%                      | 7.00%                      | 4.44%                 | 4.20%                     | 10.70%                     |
| B+                   | Laclede Gas         | 35.03                      | 2.15                     | 2.37             | 1.40              | 1.45                      | 4.14%                      | 2.50%                      | 5.00%                      | 6.14%                 | 6.64%                     | 9.14%                      |
| B+                   | UGI Corporation     | 27.28                      | 1.75                     | 1.61             | 0.69              | 0.70                      | 2.57%                      | 3.00%                      | 7.33%                      | 6.41%                 | 5.57%                     | 9.90%                      |
| B+                   | Southern Union Co.  | 27.95                      | 1.90                     | 1.80             | 0.40              | 0.42                      | 1.50%                      | NMF                        | 8.75%                      | 6.80%                 | N/A                       | 10.25%                     |
| B                    | Southwest Gas Co.   | 38.37                      | 2.00                     | 1.95             | 0.82              | 0.82                      | 2.14%                      | 0.00%                      | 8.98%                      | 5.21%                 | 2.14%                     | 11.12%                     |
| C+                   | Semco Energy        | 6.10                       | 0.35                     | 0.22             | Nil               | Nil                       | N/A                        | NMF                        | 16.67%                     | 5.74%                 | N/A                       | N/A                        |
|                      | Mean                |                            |                          |                  |                   |                           | 3.01%                      | 1.60%                      | 8.54%                      | 5.84%                 | 4.91%                     | 10.20%                     |
|                      | Median              |                            |                          |                  |                   |                           | 3.13%                      | 2.00%                      | 7.33%                      | 6.11%                 | 5.57%                     | 10.16%                     |
|                      | Weighted Average    |                            |                          |                  |                   |                           |                            |                            |                            |                       | 3.54%                     | 9.99%                      |

Sources: Columns a, b, d, e, f and g were extracted from the December 15, 2006 Value Line.

Column j represents the average estimated earnings growth extracted from Value Line, Zacks.com and ThomsonFN.com.

Column c was extracted from Yahoo Finance and represents December 29, 2006 closing stock prices.

**2007 Capitalization Rate Study  
Natural Gas Distribution Companies  
Long Term Earnings Growth**

| a                    | b                         | c     | d          | e          | f       |
|----------------------|---------------------------|-------|------------|------------|---------|
| Value Line<br>Rating | Company Name              | Zacks | Thomson FN | Value Line | Average |
| A                    | Energen Corp.             | 7.50% | 5.67%      | 8.00%      | 7.06%   |
| A                    | Nicor                     | 2.50% | 3.37%      | 4.00%      | 3.29%   |
| A                    | New Jersey Resources      | 6.00% | 5.67%      | 4.50%      | 5.39%   |
| A                    | Northwest Natural Gas Co. | 5.30% | 4.88%      | 7.00%      | 5.73%   |
| A                    | WGL Holdings              | 3.30% | 3.33%      | 1.50%      | 2.71%   |
| B++                  | AGL Resources             | 4.60% | 4.20%      | 4.00%      | 4.27%   |
| B++                  | Keyspan                   | 3.20% | 2.75%      | 1.50%      | 2.48%   |
| B++                  | Peoples Energy            | 4.00% | N/A        | NMF        | 4.00%   |
| B++                  | Piedmont Natural Gas      | 5.60% | 4.15%      | 6.00%      | 5.25%   |
| B++                  | South Jersey Industries   | 6.00% | 6.33%      | 7.00%      | 6.44%   |
| B+                   | Atmos Energy Corp.        | 5.50% | 6.15%      | 6.50%      | 6.05%   |
| B+                   | Cascade Natural Gas       | N/A   | N/A        | 7.00%      | 7.00%   |
| B+                   | Laclede Gas               | N/A   | N/A        | 5.00%      | 5.00%   |
| B+                   | UGI Corporation           | 8.00% | 8.00%      | 6.00%      | 7.33%   |
| B+                   | Southern Union Co.        | 7.50% | 7.75%      | 11.00%     | 8.75%   |
| B                    | Southwest Gas Co.         | 6.00% | 11.95%     | 9.00%      | 8.98%   |
| C+                   | Semco Energy              | 6.00% | 23.00%     | 21.00%     | 16.67%  |
|                      | Mean                      | 5.40% | 6.94%      | 6.81%      | 6.26%   |
|                      | Median                    | 5.60% | 5.67%      | 6.25%      | 5.73%   |
|                      | Weighted Average          |       |            |            | 6.98%   |

Sources: Columns a, b, e were extracted from the December 15, 2006 Value Line.  
Column c was extracted from Zacks Investment Research, Inc.  
Column d was extracted from Thomson Network.

**2007 Capitalization Rate Study**  
**Natural Gas Distribution Companies**  
**Capital Structure**

| a                    | b                         | c                              | d                                 | e                                   | f                            | g                            | h                                | i                                | j                 | k                 | l                     | m                       |
|----------------------|---------------------------|--------------------------------|-----------------------------------|-------------------------------------|------------------------------|------------------------------|----------------------------------|----------------------------------|-------------------|-------------------|-----------------------|-------------------------|
| Value Line<br>Rating | Company Name              | Common<br>Stock<br>Outstanding | Common<br>Stock Price<br>12/29/06 | Mkt Value<br>Equity<br>(\$millions) | L.T.<br>Debt<br>(\$millions) | Pfd<br>Stock<br>(\$millions) | Common<br>Equity<br>(\$millions) | Total<br>Capital<br>(\$millions) | L.T.<br>Debt<br>% | Pfd<br>Stock<br>% | Common<br>Equity<br>% | Debt<br>Equity<br>ratio |
| A                    | Energen Corp.             | 72,355,003                     | 46.94                             | 3,396.34                            | 682.90                       | 0.00                         | 3,396.34                         | 4,079.24                         | 16.74%            | 0.00%             | 83.26%                | 0.20                    |
| A                    | Nicor Inc                 | 44,709,976                     | 46.80                             | 2,092.43                            | 459.40                       | 0.60                         | 2,092.43                         | 2,552.43                         | 18.00%            | 0.02%             | 81.98%                | 0.22                    |
| A                    | New Jersey Resources      | 27,678,310                     | 48.58                             | 1,344.61                            | 332.40                       | 0.00                         | 1,344.61                         | 1,677.01                         | 19.82%            | 0.00%             | 80.18%                | 0.25                    |
| A                    | Northwest Natural Gas Co. | 27,504,896                     | 42.44                             | 1,167.31                            | 492.00                       | 0.00                         | 1,167.31                         | 1,659.31                         | 29.65%            | 0.00%             | 70.35%                | 0.42                    |
| A                    | WGL Holdings              | 48,878,000                     | 32.58                             | 1,592.45                            | 576.10                       | 28.20                        | 1,592.45                         | 2,196.75                         | 26.23%            | 1.28%             | 72.49%                | 0.36                    |
| B++                  | AGL Resources             | 77,696,090                     | 38.91                             | 3,023.15                            | 1,634.00                     | 0.00                         | 3,023.15                         | 4,657.15                         | 35.09%            | 0.00%             | 64.91%                | 0.54                    |
| B++                  | Keyspan                   | 175,283,247                    | 41.18                             | 7,218.16                            | 3,919.00                     | 0.00                         | 7,218.16                         | 11,137.16                        | 35.19%            | 0.00%             | 64.81%                | 0.54                    |
| B++                  | Peoples Energy            | 38,471,441                     | 44.57                             | 1,714.67                            | 893.60                       | 0.00                         | 1,714.67                         | 2,608.27                         | 34.26%            | 0.00%             | 65.74%                | 0.52                    |
| B++                  | Piedmont Natural Gas      | 75,327,139                     | 26.75                             | 2,015.00                            | 825.00                       | 0.00                         | 2,015.00                         | 2,840.00                         | 29.05%            | 0.00%             | 70.95%                | 0.41                    |
| B++                  | South Jersey Industries   | 29,279,288                     | 33.41                             | 978.22                              | 358.10                       | 0.00                         | 978.22                           | 1,336.32                         | 26.80%            | 0.00%             | 73.20%                | 0.37                    |
|                      | Mean                      |                                |                                   |                                     |                              |                              |                                  |                                  | 27.08%            | 0.13%             | 72.79%                | 0.38                    |
|                      | Median                    |                                |                                   |                                     |                              |                              |                                  |                                  | 27.92%            | 0.00%             | 71.72%                |                         |
|                      | Weighted Average          |                                |                                   |                                     |                              |                              |                                  |                                  | 29.28%            | 0.08%             | 70.64%                |                         |

Sources: Columns a, b, c, f and g were extracted from the December 15, 2006 Value Line.  
Column d was extracted from Yahoo Finance and represents December 29, 2006 closing stock prices.

**2007 Capitalization Rate Study**  
**Natural Gas Distribution Companies**  
**Capital Structure**

| a                    | b                  | c                              | d                                 | e                                   | f                            | g                            | h                                | i                                | j                 | k                 | l                     | m                       |
|----------------------|--------------------|--------------------------------|-----------------------------------|-------------------------------------|------------------------------|------------------------------|----------------------------------|----------------------------------|-------------------|-------------------|-----------------------|-------------------------|
| Value Line<br>Rating | Company<br>Name    | Common<br>Stock<br>Outstanding | Common<br>Stock Price<br>12/29/06 | Mkt Value<br>Equity<br>(\$millions) | L.T.<br>Debt<br>(\$millions) | Pfd<br>Stock<br>(\$millions) | Common<br>Equity<br>(\$millions) | Total<br>Capital<br>(\$millions) | L.T.<br>Debt<br>% | Pfd<br>Stock<br>% | Common<br>Equity<br>% | Debt<br>Equity<br>ratio |
| B+                   | Atmos Energy Corp. | 81,595,723                     | 31.91                             | 2,603.72                            | 2,180.80                     | 0.00                         | 2,603.72                         | 4,784.52                         | 45.58%            | 0.00%             | 54.42%                | 0.84                    |
| B+                   | Cascade Natural    | 11,505,996                     | 25.92                             | 298.24                              | 165.30                       | 0.00                         | 298.24                           | 463.54                           | 35.66%            | 0.00%             | 64.34%                | 0.55                    |
| B+                   | Laclede Gas        | 21,357,009                     | 35.03                             | 748.14                              | 395.40                       | 0.80                         | 748.14                           | 1,144.34                         | 34.55%            | 0.07%             | 65.38%                | 0.53                    |
| B+                   | UGI Corporation    | 105,413,596                    | 27.28                             | 2,875.68                            | 1,642.70                     | 0.00                         | 2,875.68                         | 4,518.38                         | 36.36%            | 0.00%             | 63.64%                | 0.57                    |
| B+                   | Southern Union Co. | 119,638,350                    | 27.95                             | 3,343.89                            | 1,632.00                     | 230.00                       | 3,343.89                         | 5,205.89                         | 31.35%            | 4.42%             | 64.23%                | 0.46                    |
| B                    | Southwest Gas Co.  | 41,464,506                     | 38.37                             | 1,590.99                            | 1,366.10                     | 0.00                         | 1,590.99                         | 2,957.09                         | 46.20%            | 0.00%             | 53.80%                | 0.86                    |
| C+                   | Semco Energy       | 35,426,386                     | 6.10                              | 216.10                              | 422.20                       | 47.80                        | 216.10                           | 686.10                           | 61.54%            | 6.97%             | 31.50%                | 1.60                    |
|                      | Mean               |                                |                                   |                                     |                              |                              |                                  |                                  | 41.60%            | 1.64%             | 56.76%                | 0.77                    |
|                      | Median             |                                |                                   |                                     |                              |                              |                                  |                                  | 36.36%            | 0.00%             | 63.64%                |                         |
|                      | Weighted Average   |                                |                                   |                                     |                              |                              |                                  |                                  | 39.50%            | 1.41%             | 59.09%                |                         |

Sources: Columns a, b, c, f and g were extracted from the December 15, 2006 Value Line.  
Column d was extracted from Yahoo Finance and represents December 29, 2006 closing stock prices.

**2007 Capitalization Rate Study**  
**Natural Gas Distribution Companies**  
**Beta Analysis**

| a                    | b   | c                     | d             | e                            | f               | g                       | h                              | i                               |
|----------------------|---|-----------------------|---------------|------------------------------|-----------------|-------------------------|--------------------------------|---------------------------------|
| Value Line<br>Rating | Company Name  | Value<br>Line<br>Beta | Zacks<br>Beta | Standard<br>& Poor's<br>Beta | Average<br>Beta | Debt<br>Equity<br>Ratio | Unlevered<br>Beta <sup>1</sup> | WTG Avg<br>Debt/Equity<br>Ratio |
| A                    | Energen Corp.   | 0.85                  | 0.50          | 0.39                         | 0.58            | 0.20                    | 0.76                           | 0.02                            |
| A                    | Nicor Inc   | 1.30                  | 0.89          | 0.85                         | 1.01            | 0.22                    | 1.15                           | 0.02                            |
| A                    | New Jersey Resources  | 0.80                  | 0.03          | 0.07                         | 0.30            | 0.25                    | 0.70                           | 0.01                            |
| A                    | Northwest Natural Gas Co.   | 0.75                  | 0.14          | 0.15                         | 0.35            | 0.42                    | 0.60                           | 0.02                            |
| A                    | Peoples Energy  | 0.90                  | 0.47          | 0.44                         | 0.60            | 0.36                    | 0.74                           | 0.02                            |
| A                    | WGL Holdings  | 0.85                  | 0.27          | 0.27                         | 0.46            | 0.54                    | 0.64                           | 0.07                            |
| B++                  | AGL Resources   | 0.95                  | 0.38          | 0.36                         | 0.56            | 0.54                    | 0.72                           | 0.17                            |
| B++                  | Keyspan   | 0.90                  | 0.51          | 0.48                         | 0.63            | 0.54                    | 0.68                           | 0.04                            |
| B++                  | Piedmont Nat'l  | 0.80                  | 0.34          | N/A                          | 0.57            | 0.41                    | 0.64                           | 0.03                            |
| B++                  | South Jersey Industries   | 0.70                  | 0.31          | 0.31                         | 0.44            | 0.37                    | 0.57                           | 0.01                            |
|                      | Mean  | 0.88                  | 0.38          | 0.37                         | 0.55            | 0.38                    | 0.72                           | 0.04                            |
|                      | Median  | 0.85                  | 0.36          | 0.36                         | 0.57            | 0.39                    | 0.69                           |                                 |
|                      | Weighted  |                       |               |                              | 0.57            |                         | 0.72                           |                                 |
|                      | Relevered Beta based on 50% Debt Capital Structure and mean Unlevered Beta <sup>2</sup>               |                       |               |                              |                 |                         |                                | 1.15                            |
|                      | Relevered Beta based on 50% Debt Capital Structure and a weighted average Unlevered Beta <sup>2</sup> |                       |               |                              |                 |                         |                                | 1.16                            |

Sources: Columns a, b and c were extracted from Value Line.  
Column d was extracted from Zacks.com.  
Column e was extracted from Standard and Poor's Stock Reports.  
Column g was extracted from capital structure worksheet.

<sup>1</sup> Unlevered Beta = Beta/[1+(1-t)(D/E)]; where D/E is the debt to equity ratio, t is the tax rate (assumed to be 40%)

<sup>2</sup> Relivered Beta = [Unlevered Beta][1+(1-t)(D/E)]; where D/E is the debt to equity ratio, t is the tax rate (assumed to be 40%)



**2007 Capitalization Rate Study**  
**Natural Gas Distribution Companies**  
**Beta Analysis**

| a          | b   | c     | d     | e        | f       | g      | h                 | i           |
|------------|---|-------|-------|----------|---------|--------|-------------------|-------------|
| Value Line |   | Value |       | Standard |         | Debt   |                   | WTG Avg     |
| Rating     | Company Name  | Line  | Zacks | & Poor's | Average | Equity | Unlevered         | Debt/Equity |
|            |   | Beta  | Beta  | Beta     | Beta    | Ratio  | Beta <sup>1</sup> | Ratio       |
| B+         | Atmos Energy Corp.  | 0.80  | 0.45  | 0.28     | 0.51    | 0.84   | 0.53              | 0.17        |
| B+         | Cascade Natural   | 0.80  | 0.41  | N/A      | 0.61    | 0.55   | 0.60              | 0.01        |
| B+         | Laclede Gas   | 0.90  | 0.49  | 0.48     | 0.62    | 0.53   | 0.68              | 0.02        |
| B+         | UGI Corporation   | 0.90  | 0.26  | 0.22     | 0.46    | 0.57   | 0.67              | 0.11        |
| B+         | Southern Union Co.  | 1.05  | 1.26  | 1.08     | 1.13    | 0.46   | 0.82              | 0.10        |
| B          | Southwest Gas Co.   | 0.85  | 0.23  | 0.19     | 0.42    | 0.46   | 0.67              | 0.10        |
| C+         | Semco Energy  | 0.80  | 1.48  | N/A      | 1.14    | 0.86   | 0.53              | 0.10        |
|            | Mean  | 0.87  | 0.65  | 0.45     | 0.70    | 0.61   | 0.64              | 0.09        |
|            | Median  | 0.85  | 0.45  | 0.28     | 0.61    | 0.55   | 0.67              |             |
|            | Weighted  |       |       |          | 0.70    |        | 0.66              |             |
|            | Relevered Beta based on 50% Debt Capital Structure and mean Unlevered Beta <sup>2</sup>               |       |       |          |         |        |                   | 1.03        |
|            | Relevered Beta based on 50% Debt Capital Structure and a weighted average Unlevered Beta <sup>2</sup> |       |       |          |         |        |                   | 1.05        |

Sources: Columns a, b and c were extracted from Value Line.  
Column d was extracted from Zacks.com.  
Column e was extracted from Standard and Poor's Stock Reports.  
Column g was extracted from capital structure worksheet.

<sup>1</sup> Unlevered Beta = Beta/[1+(1-t)(D/E)]; where D/E is the debt to equity ratio, t is the tax rate (assumed to be 40%)

<sup>2</sup> Relevered Beta = [Unlevered Beta][1+(1-t)(D/E)]; where D/E is the debt to equity ratio, t is the tax rate (assumed to be 40%)

**2007 Capitalization Rate Study  
Water Companies  
Flotation Cost Adjustment**

| <b>Equity</b>        |                     |                        |                  | <b>Debt</b>       |                     |                        |                  |
|----------------------|---------------------|------------------------|------------------|-------------------|---------------------|------------------------|------------------|
| Value Line<br>Rating | Recommended<br>Rate | Flotation<br>Cost in % | Adjusted<br>Rate | Moody's<br>Rating | Recommended<br>Rate | Flotation<br>Cost in % | Adjusted<br>Rate |
| A, B++, B+           | 10.00%              | 4.50%                  | 10.47%           | A2                | 5.95%               | 1.70%                  | 6.05%            |

$$\text{Cost of Capital Adjusted for Flotation Costs} = \frac{k_u}{1 - f}$$

Where:  $k_u$  = The cost of capital unadjusted for flotation costs

$f$  = Flotation cost as a percentage of the value of securities issued

**2007 Capitalization Rate Study  
Water Companies  
Summary of Rates of Return**

| Common Equity        |                                | Preferred Stock       |                 |                                | Bonds                  |                 |                                |
|----------------------|--------------------------------|-----------------------|-----------------|--------------------------------|------------------------|-----------------|--------------------------------|
| Value Line<br>Rating | Rate of<br>Return <sup>1</sup> | Moody's P/S<br>Yields | Moody<br>Rating | Rate of<br>Return <sup>2</sup> | Moody's Bond<br>Yields | Moody<br>Rating | Rate of<br>Return <sup>2</sup> |
| A, B++, B+           | 10.00%                         | aa=NA                 | aa1             | 6.22%                          | Aaa=NA                 | Aaa2            | 5.54%                          |
|                      |                                |                       | aa2             | 6.23%                          |                        | Aaa3            | 5.61%                          |
|                      |                                |                       | aa3             | 6.23%                          |                        | Aa1             | 5.68%                          |
|                      |                                | a=6.27%               | a1              | 6.25%                          | Aa=5.75%               | Aa2             | 5.75%                          |
|                      |                                |                       | a2              | 6.27%                          |                        | Aa3             | 5.82%                          |
|                      |                                |                       | a3              | 6.31%                          |                        | A1              | 5.88%                          |
|                      |                                | baa=6.38%             | baa1            | 6.34%                          | A=5.95%                | A2              | 5.95%                          |
|                      |                                |                       | baa2            | 6.38%                          |                        | A3              | 6.03%                          |
|                      |                                |                       | baa3            | 6.42%                          |                        | Baa1            | 6.10%                          |
|                      |                                |                       | ba1             | 6.45%                          | Baa=6.18%              | Baa2            | 6.18%                          |
|                      |                                |                       | ba2             | 6.49%                          |                        | Baa3            | 6.29%                          |
|                      |                                |                       | ba3             | 6.53%                          |                        | Ba1             | 6.39%                          |
|                      |                                |                       | b1              | 6.56%                          |                        | Ba2             | 6.50%                          |
|                      |                                |                       | b2              | 6.60%                          |                        | Ba3             | 6.61%                          |
|                      |                                |                       | b3              | 6.64%                          |                        | B1              | 6.71%                          |
|                      |                                |                       | caa1            | 6.67%                          |                        | B2              | 6.82%                          |
|                      |                                |                       | caa3            | 6.71%                          |                        | B3              | 6.93%                          |
|                      |                                |                       |                 |                                |                        | NR              | 7.03%                          |

Note: Southern California Water Company (SCWC) is the principal subsidiary of American States Water Co. As a stand alone company, SCWC is not rated by Value Line. Because American States Water Co. is part of the pool in determining the A, B++, B+ rate of return, it is staff's judgement that SCWC, as the only NR company, should receive an A, B++, B+ rate of return.

<sup>1</sup> CPUC Decision 06-01-025 sets the cost of equity at 9.80% and authorized rate of return on rate base at 8.73% for Southern California Water Company.

<sup>2</sup> Rates of Return on Preferred Stocks and Bonds were based on Moody's "Utility Preferred Stock Yields" and "Utility Bond Yields," December 2006 report. Because Moody assigns a yield to the groups Aaa, Aa, A and Baa for bonds; and aa, a, and baa for preferred stocks, the staff interpolates the difference between these groups in order to achieve a further refinement of the ratings.

**2007 Capitalization Rate Study  
Water Companies  
Capital Asset Pricing Model - Ex Ante**

| Component   | Value Line Ratings |
|---|--------------------|
|   | A, B++, B+         |
| Expected Future Return, S&P 500                                 | 13.71%             |
| Less: Risk Free Return 25 - 30 Year Treasury Bonds <sup>1</sup> | 4.83%              |
| Risk Premium  | 8.88%              |
| Beta <sup>2</sup>   | 1.08               |
| Adjusted Risk Premium   | 9.62%              |
| Risk Free Return 25 - 30 Year Treasury Bonds <sup>1</sup>       | 4.83%              |
| <b>Projected Return on Common Equity</b>                        | <b>14.45%</b>      |

<sup>1</sup> Wall Street Journal December 29, 2006 data.

<sup>2</sup> The estimated beta is based on staff's beta analysis.

**2007 Capitalization Rate Study**  
**Water Companies**  
**Capital Asset Pricing Model - Ex Post**

| Component  | Value Line Ratings |
|--|--------------------|
|  | A, B++, B+         |
| Common Stock Return (1926 - 2006) <sup>1</sup>                   | 12.30%             |
| Less: Income-Long Term Government Bonds (1926-2006) <sup>1</sup> | 5.20%              |
| Risk Premium   | 7.10%              |
| Beta <sup>2</sup>  | 1.08               |
| Adjusted Risk Premium  | 7.69%              |
| Risk Free Return 25 - 30 Year Treasury Bonds <sup>3</sup>        | 4.83%              |
| <b>Projected Return on Common Equity</b>                         | <b>12.52%</b>      |

<sup>1</sup> Ibbotson Associates Study.

<sup>2</sup> The estimated beta is based on staff's beta analysis.

<sup>3</sup> Wall Street Journal December 29, 2006 data.

**2007 Capitalization Rate Study**  
**Water Companies**  
**Equity Rates**

| a                    | b                       | c                          | d                        | e                | f                 | g                         | h                          | i                          | j                          | k                     | l                         | m                          |
|----------------------|-------------------------|----------------------------|--------------------------|------------------|-------------------|---------------------------|----------------------------|----------------------------|----------------------------|-----------------------|---------------------------|----------------------------|
| Value Line<br>Rating | Company<br>Name         | Stock<br>Price<br>12/29/06 | Est.<br>2007<br>Earnings | 2006<br>Earnings | 2006<br>Dividends | Est.<br>2007<br>Dividends | Dividend<br>Yield<br>(g/c) | Est.<br>Dividend<br>Growth | Est.<br>Earnings<br>Growth | E/P<br>Ratio<br>(d/c) | DvYld+<br>DvGrth<br>(h+i) | DvYld+<br>ErngsGr<br>(h+j) |
| B++                  | CA Water Service Group  | 40.40                      | 1.60                     | 1.40             | 1.15              | 1.16                      | 2.87%                      | 1.00%                      | 7.89%                      | 3.96%                 | 3.87%                     | 10.76%                     |
| B++                  | American States Water   | 38.62                      | 1.60                     | 1.50             | 0.91              | 0.92                      | 2.38%                      | 1.50%                      | 7.50%                      | 4.14%                 | 3.88%                     | 9.88%                      |
| B+                   | Aqua America            | 22.78                      | 0.85                     | 0.70             | 0.45              | 0.50                      | 2.19%                      | 12.00%                     | 10.10%                     | 3.73%                 | 14.19%                    | 12.29%                     |
| B                    | Southwest Water Company | 13.76                      | 0.45                     | 0.35             | 0.22              | 0.24                      | 1.74%                      | 10.50%                     | 11.50%                     | 3.27%                 | 12.24%                    | 13.24%                     |
|                      | Mean                    |                            |                          |                  |                   |                           | 2.30%                      | 6.25%                      | 9.25%                      | 3.78%                 | 8.55%                     | 11.55%                     |
|                      | Median                  |                            |                          |                  |                   |                           | 2.29%                      | 6.00%                      | 9.00%                      | 3.85%                 | 8.06%                     | 11.53%                     |
|                      | Weighted Average        |                            |                          |                  |                   |                           |                            |                            |                            |                       | 11.00%                    | 11.78%                     |

Sources: Columns a, b, d, e, f, g and i were extracted from the October 27, 2006 Value Line.

Column j represents the average estimated earnings growth extracted from Value Line, Zacks.com and ThomsonFN.com.

Column c was extracted from Yahoo Finance and represents December 29, 2006 closing stock prices.

**2007 Capitalization Rate Study  
Water Companies  
Long Term Earnings Growth**

| a                    | b                       | c          | d      | e       | f       |
|----------------------|-------------------------|------------|--------|---------|---------|
| Value Line<br>Rating | Company Name            | Value Line | Zacks  | Thomson | Average |
| B++                  | CA Water Service Group  | 4.50%      | 9.50%  | 9.67%   | 7.89%   |
| B++                  | American States Water   | 10.50%     | 6.00%  | 6.00%   | 7.50%   |
| B+                   | Aqua America            | 12.00%     | 7.70%  | 10.60%  | 10.10%  |
| B                    | Southwest Water Company | 13.50%     | 10.00% | 11.00%  | 11.50%  |
|                      | Mean                    | 10.13%     | 8.30%  | 9.32%   | 9.25%   |
|                      | Median                  | 11.25%     | 8.60%  | 10.14%  | 9.00%   |
|                      | Weighted Average        |            |        |         | 7.77%   |

Sources: Columns a, b, c were extracted from the October 27, 2006 Value Line.  
Column d was extracted from Zacks Investment Research, Inc.  
Column e was extracted from Thomson Network.

**2007 Capitalization Rate Study**  
**Water Companies**  
**Capital Structure**

| a                    | b                      | c                              | d                                 | e                                   | f                            | g                            | h                                | i                                | j                 | k                 | l                     |
|----------------------|------------------------|--------------------------------|-----------------------------------|-------------------------------------|------------------------------|------------------------------|----------------------------------|----------------------------------|-------------------|-------------------|-----------------------|
| Value Line<br>Rating | Company Name           | Common<br>Stock<br>Outstanding | Common<br>Stock Price<br>12/29/06 | Mkt Value<br>Equity<br>(\$millions) | L.T.<br>Debt<br>(\$millions) | Pfd<br>Stock<br>(\$millions) | Common<br>Equity<br>(\$millions) | Total<br>Capital<br>(\$millions) | L.T.<br>Debt<br>% | Pfd<br>Stock<br>% | Common<br>Equity<br>% |
| B++                  | CA Water Service Group | 18,406,963                     | 40.40                             | 743.64                              | 273.70                       | 3.50                         | 743.64                           | 1,020.84                         | 26.81%            | 0.34%             | 72.85%                |
| B++                  | American States Water  | 16,981,858                     | 38.62                             | 655.84                              | 268.20                       | 0.00                         | 655.84                           | 924.04                           | 29.02%            | 0.00%             | 70.98%                |
| B+                   | Aqua America           | 131,396,751                    | 22.78                             | 2,993.22                            | 907.20                       | 0.00                         | 2,993.22                         | 3,900.42                         | 23.26%            | 0.00%             | 76.74%                |
| B                    | Southwest Water Compa  | 22,908,703                     | 13.76                             | 315.22                              | 122.50                       | 0.46                         | 315.22                           | 438.18                           | 27.96%            | 0.11%             | 71.94%                |
|                      | Mean                   |                                |                                   |                                     |                              |                              |                                  |                                  | 26.76%            | 0.11%             | 73.13%                |
|                      | Median                 |                                |                                   |                                     |                              |                              |                                  |                                  | 27.38%            | 0.05%             | 72.39%                |
|                      | Weighted Average       |                                |                                   |                                     |                              |                              |                                  |                                  | 25.01%            | 0.06%             | 74.93%                |

Sources: Columns a, b, c, f and g were extracted from October 27, 2006 Value Line.

Column d was extracted from Yahoo Finance and represents 12/29/06 closing stock prices.



**2007 Capitalization Rate Study**  
**Water Companies**  
**Beta Analysis**

| a                    | b  | c                     | d             | e                            | f               | g                       | h                              | i                               |
|----------------------|--|-----------------------|---------------|------------------------------|-----------------|-------------------------|--------------------------------|---------------------------------|
| Value Line<br>Rating | Company Name   | Value<br>Line<br>Beta | Zacks<br>Beta | Standard<br>& Poor's<br>Beta | Average<br>Beta | Debt<br>Equity<br>Ratio | Unlevered<br>Beta <sup>1</sup> | WTG Avg<br>Debt/Equity<br>Ratio |
| B++                  | CA Water Service Group   | 0.85                  | 0.64          | N/A                          | 0.75            | 0.37                    | 0.70                           | 0.06                            |
| B++                  | American States Water  | 0.80                  | 0.24          | 0.28                         | 0.44            | 0.41                    | 0.64                           | 0.06                            |
| B+                   | Aqua America   | 0.85                  | 0.18          | 0.20                         | 0.41            | 0.30                    | 0.72                           | 0.19                            |
| B                    | Southwest Water Company  | 0.80                  | 0.51          | 0.49                         | 0.60            | 0.39                    | 0.65                           | 0.03                            |
|                      | Mean   | 0.83                  | 0.39          | 0.32                         | 0.55            | 0.37                    | 0.68                           | 0.08                            |
|                      | Median   | 0.83                  | 0.38          | 0.28                         | 0.52            | 0.38                    | 0.67                           |                                 |
|                      | Weighted   |                       |               |                              | 0.08            |                         | 0.70                           |                                 |
|                      | Relevered Beta based on 50% Debt Capital Structure and median unlevered Beta. <sup>2</sup>   |                       |               |                              |                 |                         | 1.08                           |                                 |
|                      | Relevered Beta based on 50% Debt Capital structure and a weighted average Beta. <sup>2</sup> |                       |               |                              |                 |                         | 1.12                           |                                 |

<sup>1</sup> Unlevered Beta = Beta/[1+(1-t)(D/E)]; where D/E is the debt to equity ratio, t is the tax rate (assumed to be 40%)

<sup>2</sup> Relivered Beta = [Unlevered Beta][1+(1-t)(D/E)]; where D/E is the debt to equity ratio, t is the tax rate (assumed to be 40%)

**California State Board of Equalization  
State-Assessed Properties Division  
2007 Capitalization Rate Study  
Natural Gas Transmission Companies**

| SBE No. | Company Name                             | Ratings   |           | Capital Structure |      | Rates of Return  |       | Basic<br>Cap<br>Rate |
|---------|--|-----------|-----------|-------------------|------|------------------|-------|----------------------|
|         |  | Financial | Bond      | Common<br>Equity  | Debt | Common<br>Equity | Debt  |                      |
| 153     | Transwestern Pipeline Company            | Not Rated | Not Rated | 75%               | 25%  | 12.04%           | 6.29% | 10.60%               |
| 180     | North Baja Pipeline, LLC                 | Not Rated | Not Rated | 75%               | 25%  | 12.04%           | 6.29% | 10.60%               |
| 187     | Mojave Pipeline Company                  | Not Rated | Not Rated | 75%               | 25%  | 12.04%           | 6.29% | 10.60%               |
| 188     | Kern River Gas Transmission Company      | Not Rated | Not Rated | 75%               | 25%  | 12.04%           | 6.29% | 10.60%               |
| 189     | Standard Pacific Gas Line Incorporated   | Not Rated | Not Rated | 75%               | 25%  | 12.04%           | 6.29% | 10.60%               |
| 190     | Tuscarora Gas Transmission Company       | Not Rated | Not Rated | 75%               | 25%  | 12.04%           | 6.29% | 10.60%               |
| 196     | Questar Southern Trails Pipeline Company | Not Rated | Not Rated | 75%               | 25%  | 12.04%           | 6.29% | 10.60%               |
| 197     | El Paso Natural Gas Company              | Not Rated | Not Rated | 75%               | 25%  | 12.04%           | 6.29% | 10.60%               |

**2007 Capitalization Rate Study  
Natural Gas Transmission Companies  
Industry Notes**

- Staff relied upon the results of the following models in the development of equity rates:
  1. Discounted Cash Flow
  2. Capital Asset Pricing Model - Consideration was given to both the ex post and ex ante risk premiums
- Staff also considered the Cost of Capital Study prepared by Tegarden and Associates, Inc.

**2007 Capitalization Rate Study  
Natural Gas Transmission Companies  
Flotation Cost Adjustment**

| Value Line<br>Rating | Recommended<br>Rate | Flotation<br>Cost in % | Adjusted<br>Rate | <b>Bond</b>       |                     |                        |                  |
|----------------------|---------------------|------------------------|------------------|-------------------|---------------------|------------------------|------------------|
|                      |                     |                        |                  | Moody's<br>Rating | Recommended<br>Rate | Flotation<br>Cost in % | Adjusted<br>Rate |
| Not Rated            | 11.50%              | 4.50%                  | 12.04%           | Not Rated         | 6.18%               | 1.70%                  | 6.29%            |

$$\text{Cost of Capital Adjusted for Flotation Costs} = \frac{k_u}{1 - f}$$

Where:  $k_u$  = The cost of capital unadjusted for flotation costs

$f$  = Flotation cost as a percentage of the value of securities issued

**2007 Capitalization Rate Study  
Natural Gas Transmission Companies  
Comparison of Return on Common Equity**

| Description  | Value Line B++, B+, B, C+ |        |        |
|--|---------------------------|--------|--------|
|  | 2007                      | 2006   | Change |
| E/P Ratio - Mean                                   | 7.37%                     | 7.75%  | -0.38% |
| E/P Ratio - Median                                 | 6.43%                     | 7.60%  | -1.17% |
| Dividends Yield + Dividends Growth - Mean          | 9.72%                     | 10.21% | -0.49% |
| Dividends Yield + Dividends Growth - Median        | 7.65%                     | 10.57% | -2.92% |
| Dividends Yield + Earnings Growth - Mean           | 10.35%                    | 11.61% | -1.26% |
| Dividends Yield + Earnings Growth - Median         | 10.97%                    | 10.35% | 0.62%  |
| Capital Asset Pricing Model (CAPM) - Ex Ante       | 12.82%                    | 11.58% | 1.24%  |
| Capital Asset Pricing Model (CAPM) - Ex Post       | 11.22%                    | 10.98% | 0.24%  |
| State-Assessed Properties Division Recommendation: | 11.50%                    | 11.50% | 0.00%  |

Interstate gas transmission companies are regulated by the Federal Energy Regulatory Commission (FERC). California is the second largest natural gas market in the United States.

The Discounted Cash Flow (DCF) model is computed using data from a sample of gas transmission companies with similar risk and operations.

The information considered by staff includes the results of DCF analysis (Dividends Yield + Dividends Growth and Dividends Yield + Earnings Growth) and the results of the Capital Asset Pricing Model (CAPM) analysis.

**2007 Capitalization Rate Study**  
**Natural Gas Transmission Companies**  
**Equity Rates**

| a          | b                   | c        | d        | e        | f         | g         | h        | i        | j        | k      | l        | m         |
|------------|---------------------|----------|----------|----------|-----------|-----------|----------|----------|----------|--------|----------|-----------|
| Value Line |                     | Stock    | 2007     |          |           | 2007      | Dividend | Est.     | Est.     | E/P    | Div Yld+ | Div Yld+  |
| Rating     | Company Name        | Price    | Est.     | 2006     | 2006      | Est.      | Yield    | Dividend | Earnings | Ratio  | Div Grwh | Engs Grwh |
|            |                     | 12/29/06 | Earnings | Earnings | Dividends | Dividends | (g/c)    | Growth   | Growth   | (d/c)  | (h+i)    | (h+j)     |
| B+         | Cabot Oil & Gas 'A' | 60.65    | 4.00     | 3.85     | 0.16      | 0.16      | 0.26%    | 4.50%    | 10.69%   | 6.60%  | 4.76%    | 10.95%    |
| B++        | Devon Energy        | 67.08    | 7.50     | 6.70     | 0.45      | 0.45      | 0.67%    | 14.00%   | 8.96%    | 11.18% | 14.67%   | 9.63%     |
| B++        | EOG Resources       | 62.45    | 5.60     | 5.35     | 0.24      | 0.28      | 0.45%    | 20.00%   | 10.54%   | 8.97%  | 20.45%   | 10.99%    |
| B++        | Equitable Resources | 41.75    | 2.20     | 1.85     | 0.87      | 0.91      | 2.18%    | 7.50%    | 9.52%    | 5.27%  | 9.68%    | 11.70%    |
| B++        | National Fuel Gas   | 38.54    | 2.30     | 2.40     | 1.18      | 1.20      | 3.11%    | 2.50%    | 3.99%    | 5.97%  | 5.61%    | 7.11%     |
| B++        | Questar Corp.       | 83.05    | 5.20     | 4.65     | 0.93      | 0.94      | 1.13%    | 2.00%    | 10.61%   | 6.26%  | 3.13%    | 11.74%    |
|            | Mean                |          |          |          |           |           | 1.30%    | 8.42%    | 9.05%    | 7.37%  | 9.72%    | 10.35%    |
|            | Median              |          |          |          |           |           | 0.90%    | 6.00%    | 10.03%   | 6.43%  | 7.65%    | 10.97%    |
|            | Weighted Average    |          |          |          |           |           |          |          |          |        | 13.29%   | 10.23%    |

Sources: Columns a, b, d, e, f, g and i were extracted from Value Line.  
Column c was extracted from the Yahoo Market Guide.  
Column j is an average of Value Line, Zacks, and Thomson.

**2007 Capitalization Rate Study  
Natural Gas Transmission Companies  
Long Term Earnings Growth**

| a                    | b                   | c          | d      | e       | f       |
|----------------------|---------------------|------------|--------|---------|---------|
| Value Line<br>Rating | Company Name        | Value Line | Zacks  | Thomson | Average |
| B+                   | Cabot Oil & Gas 'A' | 8.00%      | 11.80% | 12.27%  | 10.69%  |
| B++                  | Devon Energy        | 8.50%      | 7.90%  | 10.47%  | 8.96%   |
| B++                  | EOG Resources       | 11.50%     | 10.10% | 10.02%  | 10.54%  |
| B++                  | Equitable Resources | 9.00%      | 9.80%  | 9.75%   | 9.52%   |
| B++                  | National Fuel Gas   | 1.50%      | 5.80%  | 4.68%   | 3.99%   |
| B++                  | Questar Corp.       | 8.00%      | 12.00% | 11.82%  | 10.61%  |
|                      | Mean                | 7.75%      | 9.57%  | 9.84%   | 9.05%   |
|                      | Median              | 8.25%      | 9.95%  | 10.25%  | 10.03%  |
|                      | Weighted Average    |            |        |         | 9.31%   |

**2007 Capitalization Rate Study**  
**Natural Gas Transmission Company**  
**Capital Asset Pricing Model - Ex Ante**

| Component   | Industry Computation |
|---|----------------------|
| Expected Future Return, S&P 500 <sup>1</sup>                    | 13.71%               |
| Less: Risk Free Return 25 - 30 Year Treasury Bonds <sup>2</sup> | 4.83%                |
| Risk Premium  | 8.88%                |
| Beta  | 0.90                 |
| Adjusted Risk Premium   | 7.99%                |
| Risk Free Return 25 - 30 Year Treasury Bonds <sup>2</sup>       | 4.83%                |
| Projected Return on Common Equity                               | <u>12.82%</u>        |

<sup>1</sup> Dividend Yield for S&P 500 December 30, 2006      1.81%  
5 Year projected growth per Merrill Lynch      11.90%  
Expected future return, S&P 500      13.71%

<sup>2</sup> Wall Street Journal December 29, 2006 data



**2007 Capitalization Rate Study**  
**Natural Gas Transmission Companies**  
**Capital Asset Pricing Model - Ex Post**

| Component   | Industry Computation |
|---|----------------------|
| Common Stock Return (1926 - 2006) <sup>1</sup>            | 12.30%               |
| Less: Long Term Government Bonds <sup>1</sup>             | 5.20%                |
| Risk Premium  | 7.10%                |
| Beta  | 0.90                 |
| Adjusted Risk Premium                                     | 6.39%                |
| Risk Free Return 25 - 30 Year Treasury Bonds <sup>2</sup> | 4.83%                |
| Projected Return on Common Equity                         | 11.22%               |

<sup>1</sup> Ibbotson Associates Study

<sup>2</sup> Wall Street Journal December 29, 2006 data

**2007 Capitalization Rate Study**  
**Natural Gas Transmission Companies**  
**Beta Analysis**

| a          | b  | c      | d     | e        | f       | g                 | h                 | i           |
|------------|--|--------|-------|----------|---------|-------------------|-------------------|-------------|
| Value Line |  | Value  | Zacks | Standard |         | Debt              |                   | WTG Avg     |
| Rating     | Company Name   | Line's | Beta  | & Poor's | Average | Equity            | Unlevered         | Debt/Equity |
|            |  | Beta   |       | Beta     | Beta    | Ratio             | Beta <sup>1</sup> | Ratio       |
| B+         | Cabot Oil & Gas 'A'  | 1.00   | 0.76  | 0.60     | 0.79    | 0.13              | 0.73              | 0.006       |
| B++        | Devon Energy   | 1.05   | 0.48  | 0.34     | 0.62    | 0.23              | 0.55              | 0.116       |
| B++        | EOG Resources  | 1.05   | 0.53  | 0.50     | 0.69    | 0.05              | 0.67              | 0.011       |
| B++        | Equitable Resources  | 0.80   | 0.39  | 0.32     | 0.50    | 0.15              | 0.46              | 0.012       |
| B++        | National Fuel Gas  | 0.95   | 0.53  | 0.48     | 0.65    | 0.35              | 0.54              | 0.020       |
| B++        | Questar Corp.  | 0.90   | 0.69  | 0.66     | 0.75    | 0.14              | 0.69              | 0.016       |
|            | Mean   | 0.96   | 0.56  | 0.48     | 0.67    | 0.18              | 0.61              |             |
|            | Median   | 0.98   | 0.53  | 0.49     | 0.67    |                   | 0.61              |             |
|            | Weighted   |        |       |          | 0.65    |                   | 0.59              | 0.18        |
|            | Relevered Beta based on 25% Debt Capital Structure                             |        |       |          |         | 0.73 <sup>2</sup> |                   |             |
|            | Relevered Beta based on 25% Debt Capital Structure and a weighted average Beta |        |       |          |         | 0.71 <sup>2</sup> |                   |             |

<sup>1</sup> Unlevered Beta = Beta/[1+(1-t)(D/E)]; where D/E is the debt to equity ratio, t is the tax rate (assumed to be 40%)

<sup>2</sup> Relevered Beta = [Unlevered Beta][1+(1-t)(D/E)]; where D/E is the debt to equity ratio, t is the tax rate (assumed to be 40%)

**2007 Capitalization Rate Study  
Natural Gas Transmission Companies  
Capital Structure**

| a          | b            | c           | d                   | e                        | f                           | g                               | h                      | i                      | j                         | k                               | l           | m           | n              |
|------------|--------------|-------------|---------------------|--------------------------|-----------------------------|---------------------------------|------------------------|------------------------|---------------------------|---------------------------------|-------------|-------------|----------------|
| Value Line | Moody's Bond | Moody's P/S | Company Name        | Common Stock Outstanding | Common Stock Price 12/29/06 | Market Value Com. Stock (e * f) | L.T. Debt (\$millions) | Pfd Stock (\$millions) | Common Stock (\$millions) | Total Cap. (\$mill) (h + i + j) | L.T. Debt % | Pfd Stock % | Common Stock % |
| B+         | NR           | NR          | Cabot Oil & Gas 'A' | 47,914,159               | 60.65                       | 2,905.99                        | 380.00                 | 0.00                   | 2,905.99                  | 3,285.99                        | 11.60%      | 0.00%       | 88.40%         |
| B++        | NR           | NR          | Devon Energy        | 442,001,000              | 67.08                       | 29,649.43                       | 6,800.00               | 150.00                 | 29,649.43                 | 36,599.43                       | 18.60%      | 0.40%       | 81.00%         |
| B++        | NR           | NR          | EOG Resources       | 243,471,673              | 62.45                       | 15,204.81                       | 705.40                 | 99.20                  | 15,204.81                 | 16,009.41                       | 4.40%       | 0.60%       | 95.00%         |
| B++        | NR           | NR          | Equitable Resources | 120,772,379              | 41.75                       | 5,042.25                        | 753.40                 | 0.00                   | 5,042.25                  | 5,795.65                        | 13.00%      | 0.00%       | 87.00%         |
| B++        | NR           | NR          | National Fuel Gas   | 83,400,866               | 38.54                       | 3,214.27                        | 1,111.70               | 0.00                   | 3,214.27                  | 4,325.97                        | 25.70%      | 0.00%       | 74.30%         |
| B++        | NR           | NR          | Questar Corp.       | 85,865,721               | 83.05                       | 7,131.15                        | 1,032.40               | 0.00                   | 7,131.15                  | 8,163.55                        | 12.60%      | 0.00%       | 87.40%         |
|            |              |             | Mean                |                          |                             |                                 |                        |                        |                           |                                 | 14.32%      | 0.17%       | 85.52%         |
|            |              |             | Median              |                          |                             |                                 |                        |                        |                           |                                 | 12.80%      | 0.00%       | 87.20%         |
|            |              |             | Weighted Average    |                          |                             |                                 |                        |                        |                           |                                 | 14.54%      | 0.33%       | 85.13%         |

Sources: Columns a, d, e, h and i were extracted from the December 15, 2006 Value Line.

Columns b and c were extracted from the 2006 Moody's Public Utility and Industrial Manuals.

Column f was extracted from the Yahoo Market Guide.

NR - Not Rated

Note: It is staff's opinion that the appropriate capital structure would contain more debt financing than is reflected in the above sample. The common stock prices in the sample are reflecting the increase in the price of natural gas over last year. In determining the capital structure for a company operating pipeline assets, the increase in the equity value due to the increase in natural gas inventories or reserves should not be reflected in the capital structure chosen for the pipeline assets.

**2007 Capitalization Rate Study**  
**Natural Gas Transmission Companies**  
**Bonds - Rate of Return**

| Utility Bond Yield      | Bond Rating |       |       |       |             |
|-------------------------|-------------|-------|-------|-------|-------------|
|                         | Aaa         | Aa    | A     | Baa   | Avg Utility |
| As of December 29, 2006 | N/A         | 5.75% | 5.95% | 6.18% | 5.96%       |

Staff applied a bond rating of Baa2 for the Natural Gas Transmission Companies, which represents the estimated cost of debt for the companies in the study.

Source: Moody's Public Utility, Credit Market Trends Service.

**California State Board of Equalization  
State-Assessed Properties Division  
2007 Capitalization Rate Study  
Local Exchange Companies**

| SBE No. | Company Name  | Ratings   |           | Capital Structure |      | Rates of Return  |       | Basic<br>Cap<br>Rate |
|---------|---|-----------|-----------|-------------------|------|------------------|-------|----------------------|
|         |   | Financial | Bond      | Common<br>Equity  | Debt | Common<br>Equity | Debt  |                      |
| 279     | Pacific Bell Telephone Company                      | A+        | A2        | 80%               | 20%  | 12.30%           | 6.05% | 11.05%               |
| 201     | Verizon California, Inc.                            | A+        | A3        | 80%               | 20%  | 12.30%           | 6.13% | 11.07%               |
| 294     | SureWest Telephone                                  | B         | Not Rated | 70%               | 30%  | 13.35%           | 6.29% | 11.23%               |
| 284     | Citizens Telecommunications Co. of California, Inc. | B         | Not Rated | 70%               | 30%  | 13.35%           | 6.29% | 11.23%               |
|         | Other Local Exchange Companies                      | Not Rated | Not Rated | 70%               | 30%  | 14.66%           | 6.94% | 12.35%               |

**2007 Capitalization Rate Study  
Local Exchange Companies  
Industry Summary**

- Staff relied on the following models in the development of equity rates:
  1. Discounted Cash Flow (DCF) – Staff considered the weighted average dividend yield plus earnings growth.
  2. Capital Asset Pricing Model (CAPM) – Staff also considered both the ex ante and ex post risk premiums.
- Staff's recommended rate of return for common equity for lien date 2007 was based on the relative risk of the companies included in the sample in conjunction with the results of the various financial models. The data and/or information considered by staff include the results of the DCF analysis (Dividend Yield plus Dividend Growth and Dividend Yield plus Earnings Growth) and the CAPM analysis, and the spreads between utility bond yields. Due to recent merger activities impacting the telecommunications industry, staff placed most reliance on the results of the CAPM Ex Post and DCF analysis and less reliance on CAPM Ex Ante.
- The following companies were added to the 2007 Capitalization Rate Study sample:

Embarq Corp. – This company represents the former local wireline operations of Sprint Nextel, which was spun off on May 17, 2006.

Windstream Corporation – This company represents the former wireline operations of ALLTEL Corp., which was spun off on July 17, 2006, and then merge with VALOR Communications.
- The following company was not included in the 2007 Capitalization Rate Study sample:

ALLTEL Corp. – This company is now a pure play wireless service provider as a result of the spin off of its wireline operations on July 17, 2006, and then merged with VALOR Communications to form Windstream Corporation.

**2007 Capitalization Rate Study  
Local Exchange Companies  
Flotation Cost Adjustment**

| <b>Equity</b>        |                     |                        |                  | <b>Debt</b>       |                     |                        |                  |
|----------------------|---------------------|------------------------|------------------|-------------------|---------------------|------------------------|------------------|
| Value Line<br>Rating | Recommended<br>Rate | Flotation<br>Cost in % | Adjusted<br>Rate | Moody's<br>Rating | Recommended<br>Rate | Flotation<br>Cost in % | Adjusted<br>Rate |
| A+                   | 11.75%              | 4.50%                  | 12.30%           | Aa2               | 5.75%               | 1.70%                  | 5.85%            |
| NR-1                 | 12.75%              | 4.50%                  | 13.35%           | Aa3               | 5.82%               | 1.70%                  | 5.92%            |
| NR-2                 | 14.00%              | 4.50%                  | 14.66%           | A1                | 5.88%               | 1.70%                  | 5.99%            |
|                      |                     |                        |                  | A2                | 5.95%               | 1.70%                  | 6.05%            |
|                      |                     |                        |                  | A3                | 6.03%               | 1.70%                  | 6.13%            |
|                      |                     |                        |                  | Baa1              | 6.10%               | 1.70%                  | 6.21%            |
|                      |                     |                        |                  | Baa2              | 6.18%               | 1.70%                  | 6.29%            |
|                      |                     |                        |                  | Not Rated         | 6.83%               | 1.70%                  | 6.94%            |

$$\text{Cost of Capital Adjusted for Flotation Costs} = \frac{k_u}{1 - f}$$

Where:  $k_u$  = The cost of capital unadjusted for flotation costs  
 $f$  = Flotation cost as a percentage of the value of securities issued

NR-1 : Although no ratings were available for state-assessed companies, a Value Line rating of B was applied to the equity and a Moody bond rating of Baa2 was applied to represent the debt for companies with a value between \$50 million - \$300 million.

NR-2 : Although no ratings were available for state-assessed companies, the Value Line rating of lower than B was applied to the equity and a staff estimate was used for the debt for companies with a value less than \$50 Million.

**2007 Capitalization Rate Study**  
**Local Exchange Companies**  
**Comparison of Return On Common Equity**

| Description  | A+, A  |        |        | B++, B+, B |        |        |
|--|--------|--------|--------|------------|--------|--------|
|  | 2007   | 2006   | Change | 2007       | 2006   | Change |
| E/P Ratio - Mean   | 6.39%  | 7.24%  | -0.85% | 6.93%      | 5.59%  | 1.34%  |
| E/P Ratio - Median   | 6.85%  | 7.27%  | -0.43% | 6.67%      | 4.50%  | 2.17%  |
| Dividend Yield + Dividend Growth - Mean                    | 6.83%  | 7.80%  | -0.97% | 5.10%      | 3.76%  | 1.34%  |
| Dividend Yield + Dividend Growth - Median                  | 6.47%  | 7.40%  | -0.93% | 5.10%      | 4.75%  | 0.34%  |
| Weighted Average (Dividend Yield + Dividend Growth - Mean) | 6.59%  | 7.93%  | -1.35% | 0.89%      | 3.66%  | -2.77% |
| Dividend Yield + Earnings Growth - Mean                    | 10.40% | 10.22% | 0.18%  | 8.96%      | 13.02% | -4.06% |
| Dividend Yield + Earnings Growth - Median                  | 10.14% | 10.31% | -0.17% | 8.87%      | 15.10% | -6.24% |
| Weighted Average (Dividend Yield + Earnings Growth - Mean) | 10.62% | 9.96%  | 0.66%  | 9.01%      | 13.46% | -4.45% |

|                         | A+, A  | B++, B+, B | Lower<br>than B |
|-------------------------|--------|------------|-----------------|
| CAPM Analysis - Ex Ante |        |            |                 |
| 2007 Lien Date          | 15.65% | 13.17%     | NMF             |
| 2006 Lien Date          | 12.20% | 11.57%     | NMF             |
| Change                  | 3.45%  | 1.60%      | NMF             |
| CAPM Analysis - Ex Post |        |            |                 |
| 2007 Lien Date          | 13.48% | 11.49%     | NMF             |
| 2006 Lien Date          | 11.54% | 10.97%     | NMF             |
| Change                  | 1.94%  | 0.53%      | NMF             |
| Discounted Cash Flow    |        |            |                 |
| 2007 Lien Date          | 10.62% | 9.01%      | NMF             |
| 2006 Lien Date          | 9.96%  | 13.46%     | NMF             |
| Change                  | 0.66%  | -4.45%     | NMF             |
| 2007 Recommended Rate   | 11.75% | 12.75%     | 14.00%          |
| 2006 SBE Rate           | 11.50% | 12.50%     | 13.75%          |
| Change                  | 0.25%  | 0.25%      | 0.25%           |



**2007 Capitalization Rate Study**  
**Local Exchange Companies**  
**Equity Rates**

| a                    | b                                   | c                          | d                        | e                | f                 | g                         | h                          | i                          | j                          | k                     | l                          | m                            |
|----------------------|-------------------------------------|----------------------------|--------------------------|------------------|-------------------|---------------------------|----------------------------|----------------------------|----------------------------|-----------------------|----------------------------|------------------------------|
| Value Line<br>Rating | Company<br>Name                     | Stock<br>Price<br>12/29/06 | Est.<br>2007<br>Earnings | 2006<br>Earnings | 2006<br>Dividends | Est.<br>2007<br>Dividends | Dividend<br>Yield<br>(g/c) | Est.<br>Dividend<br>Growth | Est.<br>Earnings<br>Growth | E/P<br>Ratio<br>(d/c) | DivYld+<br>DivGrw<br>(h+i) | DivYld+<br>ErngsGrw<br>(h+j) |
| A+                   | AT&T Inc.                           | 35.75                      | 2.55                     | 2.33             | 1.33              | 1.42                      | 3.97%                      | 2.50%                      | 9.59%                      | 7.13%                 | 6.47%                      | 13.57%                       |
| A+                   | BellSouth Corp.                     | 47.11                      | 2.45                     | 2.05             | 1.18              | 1.26                      | 2.67%                      | 6.50%                      | 7.47%                      | 5.20%                 | 9.17%                      | 10.14%                       |
| A+                   | Verizon Communications              | 37.24                      | 2.55                     | 2.55             | 1.62              | 1.62                      | 4.35%                      | 0.50%                      | 3.14%                      | 6.85%                 | 4.85%                      | 7.49%                        |
|                      | Mean                                |                            |                          |                  |                   |                           | 3.67%                      | 3.17%                      | 6.73%                      | 6.39%                 | 6.83%                      | 10.40%                       |
|                      | Median                              |                            |                          |                  |                   |                           | 3.97%                      | 2.50%                      | 7.47%                      | 6.85%                 | 6.47%                      | 10.14%                       |
|                      | Weighted Average                    |                            |                          |                  |                   |                           |                            |                            |                            |                       | 6.59%                      | 10.62%                       |
| B++                  | CenturyTel Inc.                     | 43.66                      | 2.60                     | 2.45             | 0.25              | 0.26                      | 0.60%                      | 4.50%                      | 4.13%                      | 5.96%                 | 5.10%                      | 4.73%                        |
| B                    | Citizens Communications             | 14.37                      | 0.70                     | 0.64             | 1.00              | 1.00                      | 6.96%                      | NMF                        | 6.41%                      | 4.87%                 | N/A                        | 13.37%                       |
| B                    | Embarq Corp. <sup>1</sup>           | 52.56                      | 5.00                     | 5.00             | 1.00              | 2.20                      | 4.19%                      | NMF                        | 3.83%                      | 9.51%                 | N/A                        | 8.01%                        |
| B                    | Windstream Corporation <sup>2</sup> | 14.22                      | 1.05                     | 1.02             | 0.00              | 1.00                      | 7.03%                      | NMF                        | 2.69%                      | 7.38%                 | N/A                        | 9.72%                        |
|                      | Mean                                |                            |                          |                  |                   |                           | 4.69%                      | 4.50%                      | 4.27%                      | 6.93%                 | 5.10%                      | 8.96%                        |
|                      | Median                              |                            |                          |                  |                   |                           | 5.57%                      | 4.50%                      | 3.98%                      | 6.67%                 | 5.10%                      | 8.87%                        |
|                      | Weighted Average                    |                            |                          |                  |                   |                           |                            |                            |                            |                       | 0.89%                      | 9.01%                        |

Sources: Columns a, d,e ,f, g, i, were extracted from the December 29, 2006 Value Line.

Column c as of December 29, 2006, The Wall Street Journal.

Column j was extracted from the long term earnings growth page of the 2007 capitalization rate study for local exchange companies.

<sup>1</sup> Company represents the former local wireline operations of Sprint Nextel, which was spun off on May 17, 2006.

<sup>2</sup> Company represents the former wireline operations of ALLTEL Corp., which was spun off on July 17, 2006, and then merge with VALOR Communications.

**2007 Capitalization Rate Study  
Local Exchange Companies  
Long Term Earnings Growth**

| a                    | b                                   | c          | d     | e       | f       |
|----------------------|-------------------------------------|------------|-------|---------|---------|
| Value Line<br>Rating | Company Name                        | Value Line | Zacks | Thomson | Average |
| A+                   | AT&T Inc.                           | 11.50%     | 7.60% | 9.68%   | 9.59%   |
| A+                   | BellSouth Corp.                     | 9.50%      | 6.00% | 6.90%   | 7.47%   |
| A+                   | Verizon Communications              | 2.00%      | 3.60% | 3.83%   | 3.14%   |
|                      | Mean                                | 7.67%      | 5.73% | 6.80%   | 6.73%   |
|                      | Median                              | 9.50%      | 6.00% | 6.90%   | 7.47%   |
|                      | Weighted Average                    |            |       |         | 6.84%   |
| <hr/>                |                                     |            |       |         |         |
| B++                  | CenturyTel Inc.                     | 2.00%      | 6.70% | 3.70%   | 4.13%   |
| B                    | Citizens Communications             | 11.00%     | 3.90% | 4.34%   | 6.41%   |
| B                    | Embarq Corp. <sup>1</sup>           | NIL        | 4.40% | 3.25%   | 3.83%   |
| B                    | Windstream Corporation <sup>2</sup> | NMF        | -     | 2.69%   | 2.69%   |
|                      | Mean                                | 6.50%      | 5.00% | 3.76%   | 4.79%   |
|                      | Median                              | 6.50%      | 4.40% | 3.70%   | 4.13%   |
|                      | Weighted Average                    |            |       |         | 4.07%   |

Sources: Columns a, c were extracted from the December 29, 2006 Value Line.  
Column d was extracted from Zacks.com on December 29, 2006.  
Column e was extracted from ThomsonFN.com on December 29, 2006.

<sup>1</sup> Company represents the former local wireline operations of Sprint Nextel, which was spun off on May 17, 2006.

<sup>2</sup> Company represents the former wireline operations of ALLTEL Corp., which was spun off on July 17, 2006, and then merge with VALOR Communications.

**2007 Capitalization Rate Study**  
**Local Exchange Companies**  
**Capital Structure**

| a                    | b                                   | c                              | d                                 | e                         | f                                | g                                 | h                              | i                               | j                 | k                       | l                    | m                     |
|----------------------|-------------------------------------|--------------------------------|-----------------------------------|---------------------------|----------------------------------|-----------------------------------|--------------------------------|---------------------------------|-------------------|-------------------------|----------------------|-----------------------|
| Value Line<br>Rating | Company<br>Name                     | Common<br>Stock<br>Outstanding | Common<br>Stock Price<br>12/29/06 | Market<br>Value<br>Common | Long Term<br>Debt<br>(\$Million) | Preferred<br>Stock<br>(\$Million) | Common<br>Stock<br>(\$Million) | Total<br>Capital<br>(\$Million) | L.T.<br>Debt<br>% | Preferred<br>Stock<br>% | Common<br>Stock<br>% | Value<br>Line<br>Page |
| A+                   | AT&T Inc.                           | 3,842,900,000                  | 35.75                             | 137,383.68                | 26,799.00                        | 0.00                              | 137,383.68                     | 164,182.68                      | 16.32%            | 0.00%                   | 83.68%               | 719                   |
| A+                   | BellSouth Corp.                     | 1,824,067,817                  | 47.11                             | 85,931.83                 | 14,278.00                        | 0.00                              | 85,931.83                      | 100,209.83                      | 14.25%            | 0.00%                   | 85.75%               | 723                   |
| A+                   | Verizon Communications              | 2,919,515,293                  | 37.24                             | 108,722.75                | 30,154.00                        | 0.00                              | 108,722.75                     | 138,876.75                      | 21.71%            | 0.00%                   | 78.29%               | 741                   |
|                      | Mean                                |                                |                                   | 110,679.42                |                                  |                                   |                                | 403,269.26                      | 17.43%            | 0.00%                   | 82.57%               |                       |
|                      | Median                              |                                |                                   | 108,722.75                |                                  |                                   |                                |                                 | 16.32%            | 0.00%                   | 83.68%               |                       |
|                      | Weighted Average                    |                                |                                   |                           |                                  |                                   |                                |                                 | 17.66%            | 0.00%                   | 82.34%               |                       |
| B++                  | CenturyTel Inc.                     | 115,400,000                    | 43.66                             | 5,038.36                  | 2,417.80                         | 7.50                              | 5,038.36                       | 7,463.66                        | 32.39%            | 0.10%                   | 67.51%               | 724                   |
| B                    | Citizens Communications             | 321,895,531                    | 14.37                             | 4,625.64                  | 3,947.70                         | 0.00                              | 4,625.64                       | 8,573.34                        | 46.05%            | 0.00%                   | 53.95%               | 726                   |
| B                    | Embarq Corp. <sup>1</sup>           | 149,490,309                    | 52.56                             | 7,857.21                  | 6,506.00                         | 0.00                              | 7,857.21                       | 14,363.21                       | 45.30%            | 0.00%                   | 54.70%               | 730                   |
| B                    | SureWest Communications             | 14,456,000                     | 27.54                             | 398.12                    | 125.50                           | 0.00                              | 398.12                         | 523.62                          | 23.97%            | 0.00%                   | 76.03%               | 3842                  |
| B                    | Telephone & Data Systems            | 115,660,889                    | 54.33                             | 6,283.86                  | 3,340.80                         | 3.90                              | 6,283.86                       | 9,628.56                        | 34.70%            | 0.04%                   | 65.26%               | 738                   |
| B                    | Windstream Corporation <sup>2</sup> | 476,778,215                    | 14.22                             | 6,779.79                  | 5,477.40                         | 0.0                               | 6,779.79                       | 12,257.19                       | 44.69%            | 0.00%                   | 55.31%               | 744                   |
|                      | Mean                                |                                |                                   | 5,163.83                  |                                  |                                   |                                | 52,809.57                       | 37.85%            | 0.02%                   | 62.13%               |                       |
|                      | Median                              |                                |                                   | 5,661.11                  |                                  |                                   |                                |                                 | 39.69%            | 0.00%                   | 60.29%               |                       |
|                      | Weighted Average                    |                                |                                   |                           |                                  |                                   |                                |                                 | 41.31%            | 0.02%                   | 58.67%               |                       |

Sources: Columns a, c, f and g were extracted from Value Line.

Capital structure as of September 30, 2006 except for Telephone & Data Systems (TDS); TDS capital structure as of December 31, 2005.

Column d as of December 29, 2006, The Wall Street Journal.

<sup>1</sup> Company represents the former local wireline operations of Sprint Nextel, which was spun off on May 17, 2006.

<sup>2</sup> Company represents the former wireline operations of ALLTEL Corp., which was spun off on July 17, 2006, and then merge with VALOR Communications.

**2007 Capitalization Rate Study  
Local Exchange Companies  
Capital Asset Pricing Model - Ex Ante**

| Component  | Value Line Rating |            |
|--|-------------------|------------|
|  | A+, A             | B++, B+, B |
| Expected Future Return, S&P 500 <sup>1</sup>                   | 13.71%            | 13.71%     |
| Less: Risk Free Return, 25-30 Year Treasury Bonds <sup>3</sup> | 4.83%             | 4.83%      |
| Ex Ante Risk Premium   | 8.88%             | 8.88%      |
| Relevered Beta <sup>2</sup>                                    | 1.22              | 0.94       |
| Adjusted Risk Premium  | 10.82%            | 8.34%      |
| Risk Free Return, 25-30 Year Treasury Bonds <sup>3</sup>       | 4.83%             | 4.83%      |
| Projected Equity Yield   | 15.65%            | 13.17%     |

<sup>1</sup> Expected Future Return for S&P 500 Companies:

|  |        |
|--|--------|
| Dividend Yield for S&P 500 Companies as of December 29, 2006                 | 1.81%  |
| Next 5 Years Estimated Earnings Growth for S&P 500 Companies - Merrill Lynch | 11.90% |
| Total Expected Future Return for S&P 500 Companies                           | 13.71% |

<sup>2</sup> The estimated betas are derived from a representative sample of local exchange companies with similar ratings.

<sup>3</sup> As of December 29, 2006, The Wall Street Journal.

**2007 Capitalization Rate Study  
Local Exchange Companies  
Capital Asset Pricing Model - Ex Post**

| Component  | Value Line Rating |            |
|--|-------------------|------------|
|  | A+, A             | B++, B+, B |
| Common Stock Return (1926-2006) <sup>1</sup>                       | 12.30%            | 12.30%     |
| Less: Income - Long Term Government Bonds (1926-2006) <sup>1</sup> | 5.20%             | 5.20%      |
| Ex Post Risk Premium   | 7.10%             | 7.10%      |
| Relevered Beta <sup>2</sup>  | 1.22              | 0.94       |
| Adjusted Risk Premium  | 8.65%             | 6.66%      |
| Risk Free Return, 25-30 Year Treasury Bonds <sup>3</sup>           | 4.83%             | 4.83%      |
| Projected Equity Yield   | 13.48%            | 11.49%     |

<sup>1</sup> 2007 Ibbotson Associates Study (Total Returns, Income Returns and Capital Appreciation, Table 1)

<sup>2</sup> The estimated betas are derived from a representative sample of local exchange companies with similar ratings.

<sup>3</sup> As of December 29, 2006 Wall Street Journal.

**2007 Capitalization Rate Study**  
**Local Exchange Companies**  
**Beta Analysis**

| a                    | b                        | c                     | d             | e               | f               | g                       | h                              | i                               |
|----------------------|--------------------------|-----------------------|---------------|-----------------|-----------------|-------------------------|--------------------------------|---------------------------------|
| Value Line<br>Rating | Company Name             | Value<br>Line<br>Beta | Zacks<br>Beta | Thomson<br>Beta | Average<br>Beta | Debt<br>Equity<br>Ratio | Unlevered<br>Beta <sup>1</sup> | WTG Avg<br>Debt/Equity<br>Ratio |
| A+                   | AT&T Inc.                | 1.20                  | 1.56          | 0.88            | 1.21            | 0.20                    | 1.09                           | 0.08                            |
| A+                   | BellSouth Corp.          | 1.10                  | 1.77          | 0.89            | 1.25            | 0.17                    | 1.14                           | 0.04                            |
| A+                   | Verizon Communications   | 1.05                  | 1.39          | 0.95            | 1.13            | 0.28                    | 0.97                           | 0.10                            |
|                      | Mean                     | 1.12                  | 1.57          | 0.91            | 1.20            | 0.21                    | 1.06                           |                                 |
|                      | Median                   | 1.10                  | 1.56          | 0.89            | 1.21            |                         | 1.09                           |                                 |
|                      | Weighted                 |                       |               |                 | 1.19            |                         | 1.06                           | 0.22                            |
| B++                  | CenturyTel Inc.          | 1.00                  | 1.30          | 0.66            | 0.99            | 0.48                    | 0.77                           | 0.14                            |
| B                    | Citizens Communications  | 1.00                  | 1.59          | 0.59            | 1.06            | 0.85                    | 0.70                           | 0.28                            |
| B                    | SureWest Communications  | 1.20                  | 1.89          | 1.86            | 1.65            | 0.32                    | 1.39                           | 0.01                            |
| B                    | Telephone & Data Systems | 1.05                  | 1.14          | 0.73            | 0.97            | 0.53                    | 0.74                           | 0.20                            |
|                      | Mean                     | 1.06                  | 1.48          | 0.96            | 1.17            | 0.55                    | 0.90                           |                                 |
|                      | Median                   | 1.03                  | 1.45          | 0.70            | 1.02            |                         | 0.75                           |                                 |
|                      | Weighted                 |                       |               |                 | 1.02            |                         | 0.75                           | 0.62                            |

|             |  | A+, A             | B++, B+, B        |
|-------------|--|-------------------|-------------------|
| A+, A:      | Relevered beta based on 20% debt capital structure                             | 1.22 <sup>2</sup> | -----             |
|             | Relevered beta based on 20% debt capital structure and a weighted average beta | 1.22 <sup>2</sup> | -----             |
| B++, B+, B: | Relevered beta based on 30% debt capital structure                             | -----             | 1.13 <sup>2</sup> |
|             | Relevered beta based on 30% debt capital structure and a weighted average beta | -----             | 0.94 <sup>2</sup> |

Sources: Columns a, c were extracted from the December 29, 2006 Value Line.

Column d was extracted from Zacks.com on December 29, 2006.

Column e was extracted from ThomsonFN.com on December 29, 2006.

<sup>1</sup> Unlevered Beta = Value Line Beta/[1+(1-t)(D/E)]; where D/E is the debt to equity ratio, t is the tax rate (assumed to be 40%)

<sup>2</sup> Relevered Beta = [Unlevered Beta][1+(1-t)(D/E)]; where D/E is the debt to equity ratio, t is the tax rate (assumed to be 40%)

**California State Board of Equalization  
State-Assessed Properties Division  
2007 Capitalization Rate Study  
Electric Generation Facilities**

| Facility Type                                       | Ratings   |           | Capital Structure |      | Rates of Return  |       | Basic<br>Cap<br>Rate <sup>4</sup> |
|---|-----------|-----------|-------------------|------|------------------|-------|-----------------------------------|
|   | Financial | Bond      | Common<br>Equity  | Debt | Common<br>Equity | Debt  |                                   |
| <b>Recently Constructed Facilities <sup>1</sup></b> | C+        | Not Rated | 60%               | 40%  | 15.71%           | 6.83% | <b>12.16%</b>                     |
| <b>Composite Facilities <sup>2</sup></b>            | C+        | Not Rated | 60%               | 40%  | 17.02%           | 7.34% | <b>13.14%</b>                     |
| <b>Older Facilities <sup>3</sup></b>                | C+        | Not Rated | 60%               | 40%  | 17.80%           | 7.85% | <b>13.82%</b>                     |

<sup>1</sup> Recently Constructed Facilities - Facilities constructed after September 1996 incorporating modern electric generation technologies at the time they were built.

<sup>2</sup> Composite Facilities - Facilities that were sold off by vertically integrated electric utilities and for which replacements of some obsolete generation units with modern electric generation technologies have been made.

<sup>3</sup> Older Facilities - Facilities that were sold off by vertically integrated electric utilities and for which no replacements, other than for routine maintenance, have been made.

<sup>4</sup> Staff may adjust the rates stated above if the specific situation of a facility warrants an adjustment to its basic capitalization rate.

**2007 Capitalization Rate Study  
Electric Generation Facilities  
Industry Notes**

- The available information with respect to the capital structure, rates of return, and statistics based on historical operating results and market performance is not reliable due to the small number of pure play electric generation companies and the distressed nature of the surviving companies.
- Staff's recommended capital structure of 60% equity and 40% debt recognizes that a prospective purchaser of an electric generation plant would not be able to employ the high level of debt currently maintained by the Merchant Generators in the sample. The capital structure selected provides sufficient coverage of interest and principal payments on the debt.
- Staff added a risk premium of 100 basis points to the debt rate of older facilities and 50 basis points to the debt rate of the composite facilities to recognize the market's perception of additional risk present in various facility types in this industry.
- The beta used by staff in calculating the risk of electric generation facilities relative to the risk of the overall market reflects that a prospective purchaser using the recommended capital structure would be subject to less financial risk than Merchant Generator companies in the sample and more risk than Diversified Electric Utility companies in the sample.
- The following companies were added to the 2007 Capitalization Rate Study sample for electric generation companies:
  1. Constellation Energy Group, Inc.
  2. Dynegy, Inc.



**2007 Capitalization Rate Study  
Electric Generation Facilities  
Flotation Cost Adjustment**

| Facility<br>Type                             | <b>Equity</b>       |                        |                  | <b>Debt</b>         |                        |                  |
|--|---------------------|------------------------|------------------|---------------------|------------------------|------------------|
|  | Recommended<br>Rate | Flotation<br>Cost in % | Adjusted<br>Rate | Recommended<br>Rate | Flotation<br>Cost in % | Adjusted<br>Rate |
| Recently Constructed Facilities <sup>1</sup> | 15.00%              | 4.50%                  | 15.71%           | 6.71%               | 1.70%                  | 6.83%            |
| Composite Facilities <sup>2</sup>            | 16.25%              | 4.50%                  | 17.02%           | 7.21%               | 1.70%                  | 7.34%            |
| Older Facilities <sup>3</sup>                | 17.00%              | 4.50%                  | 17.80%           | 7.71%               | 1.70%                  | 7.85%            |

$$\text{Cost of Capital Adjusted for Flotation Costs} = \frac{k_u}{1 - f}$$

Where:  $k_u$  = The cost of capital unadjusted for flotation costs

$f$  = Flotation cost as a percentage of the value of securities issued

<sup>1</sup> B1 bond rating

<sup>2</sup> B1 bond rating with an additional risk premium of 50 basis points (0.5%)

<sup>3</sup> B1 bond rating with an additional risk premium of 100 basis points (1.0%)

**2007 Capitalization Rate Study  
Electric Generation Facilities  
Summary of Rates of Return**

| Common Equity                   |                             | Bonds               |              |                             |
|---------------------------------|-----------------------------|---------------------|--------------|-----------------------------|
| Facility Type                   | Rate of Return <sup>1</sup> | Moody's Bond Yields | Moody Rating | Rate of Return <sup>2</sup> |
| Recently Constructed Facilities | 15.00%                      | Aaa=NA              | Aaa2         | 5.54%                       |
|                                 |                             |                     | Aaa3         | 5.61%                       |
| Composite Facilities            | 16.25%                      | Aa=5.75%            | Aa1          | 5.68%                       |
|                                 |                             |                     | Aa2          | 5.75%                       |
| Older Facilities                | 17.00%                      | A=5.95%             | Aa3          | 5.82%                       |
|                                 |                             |                     | A1           | 5.88%                       |
|                                 |                             |                     | A2           | 5.95%                       |
|                                 |                             |                     | A3           | 6.03%                       |
|                                 |                             |                     | Baa1         | 6.10%                       |
|                                 |                             |                     | Baa2         | 6.18%                       |
|                                 |                             |                     | Baa3         | 6.29%                       |
|                                 |                             |                     | Ba1          | 6.39%                       |
|                                 |                             |                     | Ba2          | 6.50%                       |
|                                 |                             |                     | Ba3          | 6.61%                       |
|                                 |                             |                     | B1           | 6.71%                       |
|                                 |                             |                     | B2           | 6.82%                       |
|                                 |                             |                     | B3           | 6.93%                       |
|                                 |                             |                     | Caa1         | 7.03%                       |

<sup>1</sup> The Rate of Return on Common Equity was developed by staff based on the relative risk of the utilities in conjunction with the results of the various financial models and pertinent information from various sources.

<sup>2</sup> Rates of Return on Bonds are based on Moody's "Utility Bond Yields" as of December 2006. However, because Moody assigns a yield to the groups Aa, A and Baa for bonds, the staff interpolates the difference between these groups in order to achieve a further refinement of the ratings.

**2007 Capitalization Rate Study**  
**Electric Generation Facilities**  
**Comparison of Rates of Return on Common Equity**

|  | All Facilities in Study |        |        |
|--|-------------------------|--------|--------|
|  | 2007                    | 2006   | Change |
| E/P Ratio-Mean                               | 4.62%                   | 4.82%  | -0.20% |
| E/P Ratio-Median                             | 5.72%                   | 6.38%  | -0.66% |
| Div Yld + Div Growth-Mean                    | 5.59%                   | 4.59%  | 1.00%  |
| Div Yld + Div Growth-Median                  | 6.71%                   | 7.18%  | -0.47% |
| Weighted Average - Mean                      | 7.35%                   | 6.10%  | 1.25%  |
| Div Yld + Earn.Growth-Mean                   | 9.11%                   | 10.03% | -0.92% |
| Div Yld + Earn.Growth-Median                 | 8.35%                   | 9.81%  | -1.46% |
| Weighted Average - Mean                      | 10.17%                  | 10.54% | -0.37% |
| ROE% - Yahoo Finance - Utilities             | 13.46%                  | 13.72% | -0.26% |
| ROE% - Yahoo Finance - Electric Utilities    | 10.80%                  | 10.40% | 0.40%  |
| ROE% - Yahoo Finance - Diversified Utilities | 11.30%                  | N/A    | N/A    |

  

|                       | Recently<br>Constructed | Composite | Older  |
|-----------------------|-------------------------|-----------|--------|
| 2006 Recommended Rate | 14.30%                  | 15.47%    | 16.25% |
| CAPM - Ex Ante        | 17.26%                  | 19.04%    | 19.93% |
| CAPM - Ex Post        | 14.77%                  | 16.19%    | 16.90% |
| 2007 Recommended Rate | 15.00%                  | 16.25%    | 17.00% |

**2007 Capitalization Rate Study**  
**Electric Generation Facilities**  
**Capital Asset Pricing Model - Ex Ante**

| Component   | Types of Facilities  |               |               |
|---|----------------------|---------------|---------------|
|   | Recently Constructed | Composite     | Older         |
| Expected Future Return, S&P 500                                 | 13.71%               | 13.71%        | 13.71%        |
| Less: Risk Free Return 25 - 30 Year Treasury Bonds <sup>1</sup> | 4.83%                | 4.83%         | 4.83%         |
| Risk Premium  | 8.88%                | 8.88%         | 8.88%         |
| Beta <sup>2</sup>   | 1.40                 | 1.60          | 1.70          |
| Adjusted Risk Premium   | 12.43%               | 14.21%        | 15.10%        |
| Risk Free Return 25 - 30 Year Treasury Bonds <sup>1</sup>       | 4.83%                | 4.83%         | 4.83%         |
| <b>Projected Return on Common Equity</b>                        | <b>17.26%</b>        | <b>19.04%</b> | <b>19.93%</b> |

<sup>1</sup> Wall Street Journal December 29, 2006 data

<sup>2</sup> The betas are based on staff's judgement in conjunction with the results of the Beta Analysis. See explanation contained in the Industry Notes.

**2007 Capitalization Rate Study**  
**Electric Generation Facilities**  
**Capital Asset Pricing Model - Ex Post**

| Component   | Types of Facilities  |               |               |
|---|----------------------|---------------|---------------|
|   | Recently Constructed | Composite     | Older         |
| Common Stock Return (1926 - 2006) <sup>1</sup>            | 12.30%               | 12.30%        | 12.30%        |
| Less: Long Term Government Bonds <sup>1</sup>             | 5.20%                | 5.20%         | 5.20%         |
| Risk Premium  | 7.10%                | 7.10%         | 7.10%         |
| Beta <sup>2</sup>   | 1.40                 | 1.60          | 1.70          |
| Adjusted Risk Premium                                     | 9.94%                | 11.36%        | 12.07%        |
| Risk Free Return 25 - 30 Year Treasury Bonds <sup>3</sup> | 4.83%                | 4.83%         | 4.83%         |
| <b>Projected Return on Common Equity</b>                  | <b>14.77%</b>        | <b>16.19%</b> | <b>16.90%</b> |

<sup>1</sup> Ibbotson Associates Study

<sup>2</sup> The betas are based on staff's judgement in conjunction with the results of the Beta Analysis. See explanation contained in the Industry Notes.

<sup>3</sup> Wall Street Journal December 29, 2006 data

**2007 Capitalization Rate Study**  
**Electric Generation Facilities**  
**Equity Rates**

| a                                     | b                       | c                          | d                        | e                | f                 | g                         | h                          | i                          | j                          | k                     | l                         | m                          |
|---------------------------------------|-------------------------|----------------------------|--------------------------|------------------|-------------------|---------------------------|----------------------------|----------------------------|----------------------------|-----------------------|---------------------------|----------------------------|
| Value Line<br>Rating                  | Company Name            | Stock<br>Price<br>12/29/06 | Est.<br>2007<br>Earnings | 2006<br>Earnings | 2006<br>Dividends | Est.<br>2007<br>Dividends | Dividend<br>Yield<br>(g/c) | Est.<br>Dividend<br>Growth | Est.<br>Earnings<br>Growth | E/P<br>Ratio<br>(d/c) | DvYld+<br>DvGrth<br>(h+i) | DvYld+<br>ErngsGr<br>(h+j) |
| <u>Merchant Generators</u>            |                         |                            |                          |                  |                   |                           |                            |                            |                            |                       |                           |                            |
| C++                                   | AES Corp.               | 22.04                      | 1.20                     | 1.10             | 0.00              | 0.00                      | 0.00%                      | 0.00%                      | 8.35%                      | 5.44%                 | 0.00%                     | 8.35%                      |
| C+                                    | Reliant Energy Inc.     | 14.21                      | 0.20                     | (0.25)           | 0.00              | 0.00                      | 0.00%                      | 0.00%                      | 5.00%                      | 1.41%                 | 0.00%                     | 5.00%                      |
| C                                     | Dynegy, Inc.            | 7.24                       | 0.05                     | (0.85)           | 0.00              | 0.00                      | 0.00%                      | 0.00%                      | 7.00%                      | 0.69%                 | 0.00%                     | 7.00%                      |
| <u>Diversified Electric Utilities</u> |                         |                            |                          |                  |                   |                           |                            |                            |                            |                       |                           |                            |
| A                                     | Duke Energy Corp.       | 33.21                      | 1.90                     | 1.70             | 1.26              | 1.30                      | 3.91%                      | 5.00%                      | 7.14%                      | 5.72%                 | 8.91%                     | 11.06%                     |
| A                                     | Constellation Egy. Grp. | 68.87                      | 4.55                     | 3.95             | 1.51              | 1.68                      | 2.44%                      | 11.50%                     | 12.60%                     | 6.61%                 | 13.94%                    | 15.04%                     |
| A                                     | Sempra Energy           | 56.04                      | 3.60                     | 3.70             | 1.20              | 1.24                      | 2.21%                      | 4.50%                      | 5.53%                      | 6.42%                 | 6.71%                     | 7.75%                      |
| B++                                   | Xcel Energy Inc.        | 23.06                      | 1.40                     | 1.35             | 0.88              | 0.93                      | 4.03%                      | 5.50%                      | 5.57%                      | 6.07%                 | 9.53%                     | 9.60%                      |
|                                       | Mean                    |                            |                          |                  |                   |                           | 1.80%                      | 3.79%                      | 7.31%                      | 4.62%                 | 5.59%                     | 9.11%                      |
|                                       | Median                  |                            |                          |                  |                   |                           | 2.21%                      | 4.50%                      | 7.00%                      | 5.72%                 | 6.71%                     | 8.35%                      |
|                                       | Weighted Average        |                            |                          |                  |                   |                           |                            |                            |                            |                       | 7.35%                     | 10.17%                     |

Sources: Columns a, b, d, e, f, g and i were extracted from the Value Line Investment Survey Reports.  
Column j represents the average estimated earnings growth extracted from Value Line, Zacks.com and ThomsonFN.com.  
Column c was extracted from CNNMoney.com and represents December 29, 2006 closing stock prices.

**2007 Capitalization Rate Study  
Electric Generation Facilities  
Long Term Earnings Growth**

| a                    | b                                     | c          | d      | e       | f       |
|----------------------|---------------------------------------|------------|--------|---------|---------|
| Value Line<br>Rating | Company Name                          | Value Line | Zacks  | Thomson | Average |
|                      | <u>Merchant Generators</u>            |            |        |         |         |
| C++                  | AES Corp.                             | 0.50%      | 11.30% | 13.25%  | 8.35%   |
| C+                   | Reliant Energy Inc.                   | N/A        | 6.50%  | 3.50%   | 5.00%   |
| C                    | Dynegy, Inc.                          | N/A        | 8.00%  | 6.00%   | 7.00%   |
|                      | <u>Diversified Electric Utilities</u> |            |        |         |         |
| A                    | Duke Energy Corp.                     | 9.50%      | 5.60%  | 6.33%   | 7.14%   |
| A                    | Constellation Egy. Grp.               | 13.00%     | 12.30% | 12.50%  | 12.60%  |
| A                    | Sempra Energy                         | 5.50%      | 5.40%  | 5.70%   | 5.53%   |
| B++                  | Xcel Energy Inc.                      | 6.00%      | 4.30%  | 6.40%   | 5.57%   |
|                      |                                       |            |        |         |         |
|                      | Mean                                  | 6.90%      | 7.63%  | 7.67%   | 7.31%   |
|                      | Median                                | 6.00%      | 6.50%  | 6.33%   | 7.00%   |
|                      | Weighted Average                      |            |        |         | 7.46%   |

**2007 Capitalization Rate Study**  
**Electric Generation Facilities**  
**Capital Structure**

| a                                     | b                       | c                              | d                                 | e                            | f                     | g                     | h                         | i                         | j                 | k                 | l                     | m                       |
|---------------------------------------|-------------------------|--------------------------------|-----------------------------------|------------------------------|-----------------------|-----------------------|---------------------------|---------------------------|-------------------|-------------------|-----------------------|-------------------------|
| Value<br>Line<br>Rating               | Company Name            | Common<br>Stock<br>Outstanding | Common<br>Stock Price<br>12/29/06 | Mkt Value<br>Equity<br>(000) | L.T.<br>Debt<br>(000) | Pfd<br>Stock<br>(000) | Common<br>Equity<br>(000) | Total<br>Capital<br>(000) | L.T.<br>Debt<br>% | Pfd<br>Stock<br>% | Common<br>Equity<br>% | Debt<br>Equity<br>Ratio |
| <u>Merchant Generators</u>            |                         |                                |                                   |                              |                       |                       |                           |                           |                   |                   |                       |                         |
| C++                                   | AES Corp.               | 664,188,411                    | 22.04                             | 14,638.71                    | 15,387.00             | 0.00                  | 14,638.71                 | 30,025.71                 | 51.25%            | 0.00%             | 48.75%                | 1.05                    |
| C+                                    | Reliant Energy Inc.     | 308,488,738                    | 14.21                             | 4,383.62                     | 4,095.50              | 0.00                  | 4,383.62                  | 8,479.12                  | 48.30%            | 0.00%             | 51.70%                | 0.93                    |
| C                                     | Dynegy, Inc.            | 337,195,778                    | 7.24                              | 2,441.30                     | 2,320.00              | 0.00                  | 2,441.30                  | 4,761.30                  | 48.73%            | 0.00%             | 51.27%                | 0.95                    |
| Mean                                  |                         |                                |                                   |                              |                       |                       |                           |                           | 49.42%            | 0.00%             | 50.58%                | 0.98                    |
| Median                                |                         |                                |                                   |                              |                       |                       |                           |                           | 48.73%            | 0.00%             | 51.27%                | 0.95                    |
| Weighted Average                      |                         |                                |                                   |                              |                       |                       |                           |                           | 50.39%            | 0.00%             | 49.61%                | 1.02                    |
| <u>Diversified Electric Utilities</u> |                         |                                |                                   |                              |                       |                       |                           |                           |                   |                   |                       |                         |
| A                                     | Duke Energy Corp.       | 1,255,275,068                  | 33.21                             | 41,687.69                    | 18,678.00             | 0.00                  | 41,687.69                 | 60,365.69                 | 30.94%            | 0.00%             | 69.06%                | 0.45                    |
| A                                     | Constellation Egy. Grp. | 180,007,617                    | 68.87                             | 12,397.12                    | 3,515.90              | 190.00                | 12,397.12                 | 16,103.02                 | 21.83%            | 1.18%             | 76.99%                | 0.28                    |
| A                                     | Sempra Energy           | 261,213,630                    | 56.04                             | 14,638.41                    | 4,414.00              | 195.00                | 14,638.41                 | 19,247.41                 | 22.93%            | 1.01%             | 76.05%                | 0.30                    |
| B++                                   | Xcel Energy Inc.        | 405,967,399                    | 23.06                             | 9,361.61                     | 6,237.10              | 105.00                | 9,361.61                  | 15,703.71                 | 39.72%            | 0.67%             | 59.61%                | 0.66                    |
| Mean                                  |                         |                                |                                   |                              |                       |                       |                           |                           | 28.86%            | 0.72%             | 70.43%                | 0.42                    |
| Median                                |                         |                                |                                   |                              |                       |                       |                           |                           | 26.94%            | 0.84%             | 72.56%                | 0.37                    |
| Weighted Average                      |                         |                                |                                   |                              |                       |                       |                           |                           | 29.48%            | 0.44%             | 70.08%                | 0.43                    |

Sources: Columns a, b, c, f and g were extracted from the Value Line Investment Survey Reports.

Column d was extracted from CNNMoney.com and represents December 29, 2006 closing stock prices.



**2007 Capitalization Rate Study  
Electric Generation Facilities  
Beta Analysis**

| a   | b                       | c                       | d             | e                            | f               | g                       | h                              | i                               |
|---|-------------------------|-------------------------|---------------|------------------------------|-----------------|-------------------------|--------------------------------|---------------------------------|
| Financial<br>Strength<br>Value Line   | Company Name            | Value<br>Line's<br>Beta | Zacks<br>Beta | Standard<br>& Poor's<br>Beta | Average<br>Beta | Debt<br>Equity<br>Ratio | Unlevered<br>Beta <sup>1</sup> | WTG Avg<br>Debt/Equity<br>Ratio |
| <u>Merchant Generator</u>   |                         |                         |               |                              |                 |                         |                                |                                 |
| C++   | AES Corp.               | 2.05                    | 2.40          | 2.41                         | 2.29            | 1.05                    | 1.40                           | 0.73                            |
| C+  | Reliant Energy Inc.     | 1.70                    | 2.96          | 2.98                         | 2.55            | 0.93                    | 1.63                           | 0.18                            |
| C   | Dynegy, Inc.            | 2.85                    | 3.11          | 3.12                         | 3.03            | 0.95                    | 1.93                           | 0.10                            |
| Mean  |                         | 2.20                    | 2.82          | 2.84                         | 2.62            | 0.98                    | 1.65                           |                                 |
| Median  |                         | 2.05                    | 2.96          | 2.98                         | 2.55            |                         | 1.63                           |                                 |
| Weighted  |                         |                         |               |                              | 2.42            |                         | 1.51                           |                                 |
| <u>Diversified Electric Utility</u>   |                         |                         |               |                              |                 |                         |                                |                                 |
| A   | Duke Energy Corp.       | 1.30                    | 1.25          | 1.23                         | 1.26            | 0.45                    | 0.99                           | 0.24                            |
| A   | Constellation Egy. Grp. | 0.95                    | 0.53          | 0.53                         | 0.67            | 0.28                    | 0.57                           | 0.04                            |
| A   | Sempra Energy           | 1.10                    | 0.87          | 0.89                         | 0.95            | 0.30                    | 0.81                           | 0.05                            |
| B++   | Xcel Energy Inc.        | 0.90                    | 1.47          | 1.48                         | 1.28            | 0.66                    | 0.92                           | 0.09                            |
| Mean  |                         | 1.06                    | 1.03          | 1.03                         | 1.04            | 0.42                    | 0.82                           |                                 |
| Median  |                         | 1.03                    | 1.06          | 1.06                         | 1.11            |                         | 0.86                           |                                 |
| Weighted  |                         |                         |               |                              | 1.13            |                         | 0.89                           |                                 |
| Merchant Generators Relevered Beta based on 40% Debt Capital Structure            |                         |                         |               |                              |                 | 2.11                    | <sup>2</sup>                   |                                 |
| Diversified Electric Utilities Relevered Beta based on 30% Debt Capital Structure |                         |                         |               |                              |                 | 1.12                    | <sup>2</sup>                   |                                 |

Sources: Columns a, b and c were extracted from the Value Line Investment Survey Reports.  
Column d was extracted from Zacks.com.  
Column e was extracted from Standard and Poor's Stock Reports.  
Column g was extracted from capital structure worksheet.

<sup>1</sup> Unlevered Beta = Beta/[1+(1-t)(D/E)]; where D/E is the debt to equity ratio, t is the tax rate (assumed to be 40%)

<sup>2</sup> Relevered Beta = [Unlevered Beta][1+(1-t)(D/E)]; where D/E is the debt to equity ratio, t is the tax rate (assumed to be 40%)

**California State Board of Equalization  
State-Assessed Properties Division  
2007 Capitalization Rate Study  
Interexchange Telephone Companies**

| SBE No.     | Company Name                                       | Ratings   |           | Capital Structure |                   | Rates of Return  |                   | Basic<br>Cap<br>Rate |
|-------------|--|-----------|-----------|-------------------|-------------------|------------------|-------------------|----------------------|
|             |  | Financial | Bond      | Common<br>Equity  | Long Term<br>Debt | Common<br>Equity | Long Term<br>Debt |                      |
| <b>2310</b> | <b>AT&amp;T Communications, Inc.</b>               | A+        | A2        | 75%               | 25%               | 14.14%           | 6.05%             | <b>12.12%</b>        |
| <b>2014</b> | <b>Sprint Communications Co., L.P.</b>             | B+        | Baa3      | 75%               | 25%               | 14.66%           | 6.40%             | <b>12.59%</b>        |
| <b>2274</b> | <b>MCIWorldCom Network Services, Inc.</b>          | Not Rated | Not Rated | 75%               | 25%               | 14.66%           | 6.40%             | <b>12.59%</b>        |
| <b>2372</b> | <b>MCI Metro Access Transmission Services, LLC</b> | Not Rated | Not Rated | 75%               | 25%               | 14.66%           | 6.40%             | <b>12.59%</b>        |
| <b>7630</b> | <b>Broadwing Communications, LLC</b>               | B         | Not Rated | 75%               | 25%               | 14.66%           | 6.40%             | <b>12.59%</b>        |
| <b>7522</b> | <b>Time Warner Telecom of California, L.P.</b>     | B         | Baa2      | 75%               | 25%               | 14.66%           | 6.29%             | <b>12.57%</b>        |
| <b>7761</b> | <b>Level 3 Communications, LLC</b>                 | C++       | Caa2      | 60%               | 40%               | 16.75%           | 7.26%             | <b>12.96%</b>        |
| <b>2043</b> | <b>Pac-West Telecomm, Inc.</b>                     | C+        | Not Rated | 60%               | 40%               | 16.75%           | 7.37%             | <b>13.00%</b>        |
| <b>2463</b> | <b>Qwest Communications Corporation</b>            | C+        | Not Rated | 60%               | 40%               | 16.75%           | 7.37%             | <b>13.00%</b>        |
| <b>7686</b> | <b>Primus Telecommunications, Inc.</b>             | C         | Not Rated | 60%               | 40%               | 16.75%           | 7.48%             | <b>13.04%</b>        |
|             | <b>Other Interexchange Carriers</b>                | Not Rated | Not Rated | 60%               | 40%               | 19.90%           | 8.13%             | <b>15.19%</b>        |
|             | <b>Other Interexchange Resellers</b>               | Not Rated | Not Rated | 60%               | 40%               | 23.04%           | 8.90%             | <b>17.38%</b>        |

**2007 Capitalization Rate Study  
Interexchange Telephone Companies  
Industry Notes**

- Staff relied on the Capital Asset Pricing Model in the development of equity rates. Consideration was given to both the ex post and ex ante risk premiums.
- Staff did not consider the Discounted Cash Flow model because of the limited number of companies paying dividends.
- For companies whose common equity, preferred stocks and/or bonds are not rated, staff judgment is used in assigning the rates of return because the circumstances or reasons for not rating the bonds or preferred stocks are different for each company.
- Talk America was not included in the 2007 Capitalization Rate Study Sample for Interexchange companies because it was acquired by Cavalier Telephone Corporation on September 22, 2006. Yak Communications was also not included in the 2007 Interexchange Capitalization Rate Study because it was acquired by Globalive Communications Corporation on September 21, 2006.
- The capitalization rates derived are intended to be applied only to the companies' unitary interexchange telephone operations.

**2007 Capitalization Rate Study  
Interexchange Telephone Companies  
Flotation Cost Adjustment**

| <b>Equity</b>                 |                     |                        |                  | <b>Debt</b>       |                     |                        |                  |
|-------------------------------|---------------------|------------------------|------------------|-------------------|---------------------|------------------------|------------------|
| Value Line<br>Rating          | Recommended<br>Rate | Flotation<br>Cost in % | Adjusted<br>Rate | Moody's<br>Rating | Recommended<br>Rate | Flotation<br>Cost in % | Adjusted<br>Rate |
| A+                            | 13.50%              | 4.50%                  | 14.14%           | A-2               | 5.95%               | 1.70%                  | 6.05%            |
| B+, B                         | 14.00%              | 4.50%                  | 14.66%           | A-3               | 6.03%               | 1.70%                  | 6.13%            |
| C+, C                         | 16.00%              | 4.50%                  | 16.75%           | Baa1              | 6.10%               | 1.70%                  | 6.21%            |
| Other Interexchange Carriers  | 19.00%              | 4.50%                  | 19.90%           | Baa2              | 6.18%               | 1.70%                  | 6.29%            |
| Other Interexchange Resellers | 22.00%              | 4.50%                  | 23.04%           | Baa3              | 6.29%               | 1.70%                  | 6.40%            |
|                               |                     |                        |                  | Ba1               | 6.39%               | 1.70%                  | 6.50%            |
|                               |                     |                        |                  | B2                | 6.82%               | 1.70%                  | 6.94%            |
|                               |                     |                        |                  | B3                | 6.93%               | 1.70%                  | 7.05%            |
|                               |                     |                        |                  | Caa1              | 7.03%               | 1.70%                  | 7.15%            |
|                               |                     |                        |                  | Caa2              | 7.14%               | 1.70%                  | 7.26%            |
|                               |                     |                        |                  | Caa3              | 7.25%               | 1.70%                  | 7.37%            |
|                               |                     |                        |                  | Ca                | 7.35%               | 1.70%                  | 7.48%            |
|                               |                     |                        |                  | Not Rated         | 8.00%               | 1.70%                  | 8.13%            |
|                               |                     |                        |                  | Not Rated         | 8.75%               | 1.70%                  | 8.90%            |

Cost of Capital Adjusted for Flotation Costs =  $\frac{k_u}{1 - f}$

Where:  $k_u$  = The cost of capital unadjusted for flotation costs

$f$  = Flotation cost as a percentage of the value of securities issued

**2007 Capitalization Rate Study  
Interexchange Telephone Companies  
Summary of Rates of Return**

| Common Equity                 |                             | Bonds              |                        |                             |
|-------------------------------|-----------------------------|--------------------|------------------------|-----------------------------|
| Value Line Rating             | Rate of Return <sup>1</sup> | Moody's Bond Yield | Moody's Bond Rating    | Rate of Return <sup>2</sup> |
| A+                            | 13.50%                      | Aa = 5.75          | Aa2                    | 5.75%                       |
| B+, B                         | 14.00%                      |                    | Aa3                    | 5.82%                       |
| C+, C                         | 16.00%                      |                    | A1                     | 5.88%                       |
| Other Interexchange Carriers  | 19.00%                      | A = 5.95           | A2                     | 5.95%                       |
| Other Interexchange Resellers | 22.00%                      |                    | A3                     | 6.03%                       |
|                               |                             |                    | Baa1                   | 6.10%                       |
|                               |                             |                    | Baa2                   | 6.18%                       |
|                               |                             |                    | Baa3                   | 6.29%                       |
|                               |                             |                    | Ba1                    | 6.39%                       |
|                               |                             |                    | Ba2                    | 6.50%                       |
|                               |                             |                    | Ba3                    | 6.61%                       |
|                               |                             |                    | B1                     | 6.71%                       |
|                               |                             |                    | B2                     | 6.82%                       |
|                               |                             |                    | B3                     | 6.93%                       |
|                               |                             |                    | Caa1                   | 7.03%                       |
|                               |                             |                    | Caa2                   | 7.14%                       |
|                               |                             |                    | Caa3                   | 7.25%                       |
|                               |                             |                    | Ca                     | 7.35%                       |
|                               |                             |                    | Not Rated <sup>3</sup> |                             |

<sup>1</sup> The Rates of Return on Common Equity were developed by staff based on the relative risk of the utilities in conjunction with the results of the Capital Asset Pricing Models.

<sup>2</sup> The Rates of Return on Bonds were based on Moody's Utility Bond Yields as of December 29, 2006. However, because Moody's assigns a yield only to the groups Aa, A and Baa for bonds, staff interpolates the difference between these groups in order to achieve a refinement of the ratings.

<sup>3</sup> For companies whose bonds are not rated, staff judgement is used in assigning the rates of return because the circumstances or reasons for not rating the bonds or preferred stocks are different for each company.

**2007 Capitalization Rate Study**  
**Interexchange Telephone Companies**  
**Comparison of Rates of Return on Common Equity**

|  | Value Line A+, B+, B |        |        |
|--|----------------------|--------|--------|
|  | 2007                 | 2006   | Change |
| E/P Ratio-Mean                               | 4.76%                | 7.92%  | -3.16% |
| E/P Ratio-Median                             | 5.04%                | 6.42%  | -1.38% |
| Div Yld + Div Growth-Mean                    | 3.93%                | 12.76% | -8.83% |
| Div Yld + Div Growth-Median                  | 4.78%                | 8.43%  | -3.65% |
| Div Yld + Earn.Growth-Mean                   | 10.61%               | 12.55% | -1.93% |
| Div Yld + Earn.Growth-Median                 | 10.92%               | 12.00% | -1.08% |
| Capital Asset Pricing Model (CAPM) - Ex Ante | 15.57%               | 13.37% | 2.20%  |
| Capital Asset Pricing Model (CAPM) - Ex Post | 13.42%               | 12.62% | 0.80%  |

|                       | Value Line Ratings |        |        |                       |                        |
|-----------------------|--------------------|--------|--------|-----------------------|------------------------|
|                       | A+                 | B+, B  | C+, C  | Other IEX<br>Carriers | Other IEX<br>Resellers |
| 2006 Recommended Rate | 13.50%             | 13.50% | 15.50% | 18.50%                | 21.50%                 |
| CAPM - Ex Ante        | 15.57%             | 15.57% | 17.79% | NMF                   | NMF                    |
| CAPM - Ex Post        | 13.42%             | 13.42% | 15.20% | NMF                   | NMF                    |
| 2007 Recommended Rate | 13.50%             | 14.00% | 16.00% | 19.00%                | 22.00%                 |

**2007 Capitalization Rate Study**  
**Interexchange Telephone Companies**  
**Equity Rates**

| a          | b                   | c        | d         | e    | f         | g         | h        | i         | j         | k      | l      | m       |
|------------|---------------------|----------|-----------|------|-----------|-----------|----------|-----------|-----------|--------|--------|---------|
| Value Line |                     | Stock    | Estimated |      |           | Dividend  | Dividend | Estimated | Estimated | E/P    | DvYld+ | DvYld+  |
| Rating     | Company Name        | Price    | 2007      | 2006 | 2006      | Est. 2007 | Yield    | Dividend  | Earnings  | Ratio  | DvGrth | ErngsGr |
|            |                     | 12/29/06 | EPS       | EPS  | Dividends | Amount    | (g/c)    | Growth    | Growth    | (d/c)  | (h+i)  | (h+j)   |
| A+         | AT&T Inc.           | 35.75    | 2.55      | 2.33 | 1.33      | 1.42      | 3.97%    | 2.50%     | 9.59%     | 7.13%  | 6.47%  | 13.57%  |
| B+         | Commonwealth Tel.   | 41.86    | 2.65      | 2.65 | 2.00      | 2.00      | 4.78%    | 0.00%     | 3.50%     | 6.33%  | 4.78%  | 8.28%   |
| B+         | CT Communications   | 22.92    | 0.86      | 0.85 | 0.42      | NMF       |          | 11.50%    | NMF       | 3.75%  |        | 11.50%  |
| B+         | Sprint Nextel       | 18.89    | 1.25      | 0.50 | 0.10      | 0.10      | 0.53%    | 0.00%     | 9.82%     | 6.62%  | 0.53%  | 10.34%  |
| B          | Broadwing Corp      | 15.62    | 0.19      | 0.59 | 0.00      | NMF       |          | 0.00%     | 4.00%     | 1.22%  |        | 4.00%   |
| B          | Gen'l Communic. 'A' | 15.73    | 0.55      | 0.39 | 0.00      | NMF       |          | 0.00%     | 16.00%    | 3.50%  |        | 16.00%  |
| B          | Time Warner Telecom | 19.93    | 0.06      | 0.53 | 0.00      | NMF       |          | 0.00%     | 13.53%    | 0.30%  |        | 13.53%  |
| C++        | Level 3 Comm.       | 5.60     | 0.47      | 0.68 | 0.00      | NMF       |          | 0.00%     | 16.83%    | 8.39%  |        | 16.83%  |
| C+         | Qwest Commun. Intl  | 8.37     | 1.80      | 0.30 | 0.00      | 0.00      | 0.00%    | 0.00%     | 6.04%     | 21.51% | 0.00%  | 6.04%   |
| C+         | US LEC Corp.        | 9.31     | 0.19      | 0.92 | 0.00      | NMF       |          | 0.00%     | NMF       | 2.04%  |        | NMF     |
|            | Mean                |          |           |      |           |           | 2.32%    | 1.40%     | 9.91%     | 6.08%  | 2.94%  | 11.12%  |
|            | Median              |          |           |      |           |           | 2.25%    | 0.00%     | 9.70%     | 5.04%  | 2.65%  | 11.50%  |
|            | Weighted Average    |          |           |      |           |           |          |           |           |        | 3.82%  | 12.01%  |

Sources: Columns a, b, d, e, f, g, h and i were extracted from the December 29, 2006 Value Line.  
Column c was extracted from Yahoo Finance December 29, 2006 closing stock prices.  
Column j is based on the average estimated earnings growth rate from Value Line, Zacks and Thomson Financial.

**2007 Capitalization Rate Study**  
**Interexchange Telephone Companies**  
**Capital Asset Pricing Model - Ex Ante**

| Component   | Value Line Rating |        |
|---|-------------------|--------|
|   | A+, B+, B         | C+, C  |
| Expected Future Return  | 13.71%            | 13.71% |
| Less: Risk Free Return 25 - 30 Year Treasury Bonds <sup>2</sup> | 4.83%             | 4.83%  |
| Risk Premium  | 8.88%             | 8.88%  |
| Relevered Beta <sup>3</sup>                                     | 1.21              | 1.46   |
| Adjusted Risk Premium   | 10.74%            | 12.96% |
| Risk Free Return 25 - 30 Year Treasury Bonds <sup>2</sup>       | 4.83%             | 4.83%  |
| Projected Return on Common Equity                               | 15.57%            | 17.79% |

<sup>1</sup> Expected Future Return

Growth Component- Merrill Lynch

11.90%

Dividend Yield for S&P 500 - December 29, 2006

1.81%

13.71%

<sup>2</sup> Wall Street Journal December 29, 2006 data.

<sup>3</sup> The estimated betas for A+, B+, B, C+, and C rated companies are based on interexchange data from the Beta Analysis page.



**2007 Capitalization Rate Study**  
**Interexchange Telephone Companies**  
**Capital Asset Pricing Model - Ex Post**

| Component   | Value Line Rating |        |
|---|-------------------|--------|
|   | A+, B+, B         | C+, C  |
| Total Return, Large Company Stocks (1926-2006) <sup>1</sup> | 12.30%            | 12.30% |
| Less: Long Term Government Bonds <sup>1</sup>               | 5.20%             | 5.20%  |
| Risk Premium  | 7.10%             | 7.10%  |
| Relevered Beta <sup>2</sup>                                 | 1.21              | 1.46   |
| Adjusted Risk Premium                                       | 8.59%             | 10.37% |
| Risk Free Return 25 - 30 Year Treasury Bonds <sup>3</sup>   | 4.83%             | 4.83%  |
| Projected Return on Common Equity                           | 13.42%            | 15.20% |

<sup>1</sup> Ibbotson Associates Study

<sup>2</sup> The estimated betas for A+, B+, B, C+, and C rated companies are based on interexchange data from the Beta Analysis page.

<sup>3</sup> Wall Street Journal December 29, 2006 data.

**2007 Capitalization Rate Study  
Interexchange Telephone Companies  
Beta Analysis**

| a  | b                   | c                  | d             | e                                  | f               | g                       | h                              | i                               |
|--|---------------------|--------------------|---------------|------------------------------------|-----------------|-------------------------|--------------------------------|---------------------------------|
| Value Line<br>Rating   | Company Name        | Value Line<br>Beta | Zacks<br>Beta | First<br>Call<br>Beta <sup>1</sup> | Average<br>Beta | Debt<br>Equity<br>Ratio | Unlevered<br>Beta <sup>2</sup> | Wtg Avg<br>Debt/Equity<br>Ratio |
| A+   | AT&T Inc.           | 1.20               | 1.56          | 0.88                               | 1.21            | 0.20                    | 1.09                           | 0.13                            |
| B+   | Commonwealth Tel.   | NMF                | 0.70          | 0.59                               | 0.65            | 0.34                    | 0.54                           | 0.00                            |
| B+   | CT Communications   | 1.00               | 0.34          | 1.62                               | 0.99            | 0.08                    | 0.94                           | 0.00                            |
| B+   | Sprint Nextel       | 1.25               | 1.87          | 1.25                               | 1.46            | 0.36                    | 1.20                           | 0.11                            |
| B  | Broadwing Corp      | 1.45               | 3.93          | NMF                                | 2.69            | 0.15                    | 2.47                           | 0.00                            |
| B  | Gen'l Communic. 'A' | 1.25               | 0.84          | 0.87                               | 0.99            | 0.57                    | 0.74                           | 0.00                            |
| B  | Time Warner Telecom | 2.00               | 4.12          | 1.83                               | 2.65            | 0.50                    | 2.04                           | 0.01                            |
|  | Mean                | 1.36               | 1.91          | 1.17                               | 1.52            | 0.31                    | 1.29                           |                                 |
|  | Median              | 1.25               | 1.56          | 1.07                               | 1.21            |                         | 1.09                           |                                 |
|  | Weighted            |                    |               |                                    | 1.31            |                         | 1.28                           | 0.25                            |
| C++  | Level 3 Comm.       | 1.35               | 0.72          | 1.71                               | 1.26            | 1.00                    | 0.79                           | 0.04                            |
| C+   | Fibernet Telecom    | 1.25               | 2.56          | 2.02                               | 1.94            | 0.28                    | 1.66                           | 0.00                            |
| C+   | Pac-West Telecom    | 1.00               | 1.09          | NMV                                | 1.05            | 25.33                   | 0.06                           | 0.00                            |
| C+   | Qwest Commun. Intl  | 1.95               | 3.58          | 1.42                               | 2.32            | 0.83                    | 1.55                           | 0.08                            |
| C+   | US LEC Corp.        | 1.20               | 1.49          | 1.62                               | 1.44            | 1.51                    | 0.75                           | 0.00                            |
| C  | Primus Telecomm     | 0.90               | 2.43          | 1.14                               | 1.49            | 12.97                   | 0.17                           | 0.03                            |
|  | Mean                | 1.35               | 1.98          | 1.58                               | 1.58            | 6.99                    | 0.83                           |                                 |
|  | Median              | 1.25               | 1.96          | 1.62                               | 1.46            |                         | 0.77                           |                                 |
|  | Weighted            |                    |               |                                    | 1.97            |                         | 1.28                           | 0.16                            |
| A+, B+ or B Rating: Relevered Beta based on 25% Debt Capital Structure and weighted average beta.  |                     |                    |               |                                    |                 | 1.53 <sup>3</sup>       |                                |                                 |
| C++, C+ or C Rating: Relevered Beta based on 40% Debt Capital Structure and weighted average beta. |                     |                    |               |                                    |                 | 1.80 <sup>3</sup>       |                                |                                 |

<sup>1</sup> Standard and Poor's data was not available for many of the sample companies, therefore, First Call betas were used.

<sup>2</sup> Unlevered Beta = Value Line Beta/[1+(1-t)(D/E)]; where D/E is the debt to equity ratio, t is the tax rate (assumed to be 40%)

<sup>3</sup> Relevered Beta = [Unlevered Beta][1+(1-t)(D/E)]; where D/E is the debt to equity ratio, t is the tax rate (assumed to be 40%)

**2007 Capitalization Rate Study**  
**Interexchange Telephone Companies**  
**Capital Structure**

| a          | b         | c                   | d             | e        | f            | g            | h            | i            | j                   | k      | l      |
|------------|-----------|---------------------|---------------|----------|--------------|--------------|--------------|--------------|---------------------|--------|--------|
| Value Line | Moody's   |                     | Common        | Stock    | Mkt Value    | Pfd          | L.T.         | Total        | Common              | Pfd    | L.T.   |
| Rating     | Bond      | Company Name        | Stock         | Price    | Equity       | Stock        | Debt         | Capital      | Equity              | Stock  | Debt   |
|            | Rating    |                     | Outstanding   | 12/29/06 | (\$Millions) | (\$Millions) | (\$Millions) | (\$Millions) | %                   | %      | %      |
| A+         | A2        | AT&T Inc.           | 3,842,900,000 | 35.75    | 137,383.7    | 0.0          | 26,799.0     | 164,182.7    | 83.68%              | 0.00%  | 16.32% |
| B+         | Not Rated | Commonwealth Tel.   | 21,053,253    | 41.86    | 881.3        | 0.0          | 300.0        | 1,181.3      | 74.60%              | 0.00%  | 25.40% |
| B+         | Not Rated | CT Communications   | 20,026,054    | 22.92    | 459.0        | 0.0          | 36.3         | 495.3        | 92.67%              | 0.00%  | 7.33%  |
| B+         | Baa3      | Sprint Nextel       | 2,894,903,669 | 18.89    | 54,684.7     | 0.0          | 19,643.0     | 74,327.7     | 73.57%              | 0.00%  | 26.43% |
| B          | Not Rated | Broadwing Corp      | 88,173,571    | 15.62    | 1,377.3      | 0.0          | 199.9        | 1,577.2      | 87.33%              | 0.00%  | 12.67% |
| B          | B1        | Gen'l Communic. 'A' | 53,269,000    | 15.73    | 837.9        | 0.0          | 475.8        | 1,313.7      | 63.78%              | 0.00%  | 36.22% |
| B          | Baa2      | Time Warner Telecom | 122,822,772   | 19.93    | 2,447.9      | 0.0          | 1,218.5      | 3,666.4      | 66.77%              | 0.00%  | 33.23% |
|            |           | Mean                |               |          |              |              |              |              | 77.49%              | 0.00%  | 22.51% |
|            |           | Median              |               |          |              |              |              |              | 74.60%              | 0.00%  | 25.40% |
|            |           | Weighted Average    |               |          |              |              |              |              | 80.27%              | 0.00%  | 19.73% |
| C++        | Caa2      | Level 3 Comm.       | 1,174,953,605 | 5.60     | 6,579.7      | 0.0          | 6,577.0      | 13,156.7     | 50.01%              | 0.00%  | 49.99% |
| C+         | Not Rated | Fibernet Telecom    | 7,008,849     | 6.66     | 46.7         | 0.0          | 13.3         | 60.0         | 77.83%              | 0.00%  | 22.17% |
| C+         | Not Rated | Pac-West Telecom    | 37,667,528    | 0.05     | 1.9          | 0.0          | 47.7         | 49.6         | 3.80%               | 0.00%  | 96.20% |
| C+         | Not Rated | Qwest Commun. Intl  | 1,903,591,000 | 8.37     | 15,933.1     | 0.0          | 13,228.0     | 29,161.1     | 54.64%              | 0.00%  | 45.36% |
| C+         | Not Rated | US LEC Corp.        | 31,943,000    | 9.31     | 291.4        | 291.4        | 149.6        | 732.4        | 39.79%              | 39.79% | 20.43% |
| C          | Not Rated | Primus Telecomm     | 113,848,540   | 0.41     | 46.7         | 0.0          | 605.5        | 652.2        | 7.16%               | 0.00%  | 92.84% |
|            |           | Mean                |               |          |              |              |              |              | 38.87%              | 6.63%  | 54.50% |
|            |           | Median              |               |          |              |              |              |              | 44.90%              | 0.00%  | 47.68% |
|            |           | Weighted Average    |               |          |              |              |              |              | 52.27% <sup>2</sup> | 0.67%  | 47.07% |

Sources: Columns a, c, d, g, h and i were extracted from Value Line.  
Column b was extracted from Moody's Investor Service.  
Column e was extracted from Yahoo Finance closing stock prices.

<sup>1</sup> Due to the distress of the companies represented by this group, the common equity percentage is not indicative of market conditions thus, the capital structure derived is not adequate for developing capitalization rates.

**2007 Capitalization Rate Study  
Interexchange Telephone Companies  
Long Term Earnings Growth**

| a                    | b                   | c          | d      | e       | f       |
|----------------------|---------------------|------------|--------|---------|---------|
| Value Line<br>Rating | Company Name        | Value Line | Zacks  | Thomson | Average |
| A+                   | AT&T Inc.           | 11.50%     | 7.60%  | 9.68%   | 9.59%   |
| B+                   | Commonwealth Tel.   | 2.00%      | NMF    | 5.00%   | 3.50%   |
| B+                   | Sprint Nextel       | NMF        | 9.40%  | 10.23%  | 9.82%   |
| B                    | Broadwing Corp      | 4.00%      | NMF    | NMF     | 4.00%   |
| B                    | Gen'l Communic. 'A' | 16.00%     | NMF    | NMF     | 16.00%  |
| B                    | Time Warner Telecom | 13.30%     | 13.30% | 14.00%  | 13.53%  |
| C++                  | Level 3 Comm.       | 14.00%     | 14.00% | 22.50%  | 16.83%  |
| C+                   | Qwest Commun. Intl  | NMF        | 4.60%  | 7.48%   | 6.04%   |
|                      | Mean                | 10.13%     | 9.78%  | 11.48%  | 9.91%   |
|                      | Median              | 12.40%     | 9.40%  | 9.96%   | 9.70%   |
|                      | Weighted Average    |            |        |         | 9.65%   |

Sources: Columns a, b and c were extracted from Value Line.

Column d was extracted from the Zacks Investment Research, Inc.

Column e was extracted from the Thomson Financial Network.

**California State Board of Equalization  
State-Assessed Properties Division  
2007 Capitalization Rate Study  
Wireless Companies**

| SBE No.     | Company Name  | Rating | Capital Structure |      | Rates of Return  |       | Basic<br>Cap<br>Rate |
|-------------|---|--------|-------------------|------|------------------|-------|----------------------|
|             |   |        | Common<br>Equity  | Debt | Common<br>Equity | Debt  |                      |
| <b>2512</b> | <b>Verizon Wireless (VAW) LLC</b>                   | NR-1   | 75%               | 25%  | 13.61%           | 6.10% | <b>11.74%</b>        |
| <b>2513</b> | <b>Sacramento Valley Limited Partnership</b>        | NR-1   | 75%               | 25%  | 13.61%           | 6.10% | <b>11.74%</b>        |
| <b>2532</b> | <b>Los Angeles SMSA Ltd., Partnership</b>           | NR-1   | 75%               | 25%  | 13.61%           | 6.10% | <b>11.74%</b>        |
| <b>2559</b> | <b>GTE Mobilnet of California, Ltd. Partnership</b> | NR-1   | 75%               | 25%  | 13.61%           | 6.10% | <b>11.74%</b>        |
| <b>2606</b> | <b>Cingular Wireless, LLC</b>                       | NR-1   | 75%               | 25%  | 13.61%           | 6.10% | <b>11.74%</b>        |
| <b>2720</b> | <b>Sprint PCS</b>                                   | NR-1   | 75%               | 25%  | 13.61%           | 6.10% | <b>11.74%</b>        |
| <b>2737</b> | <b>Sprint Nextel Corporation</b>                    | NR-1   | 75%               | 25%  | 13.61%           | 6.10% | <b>11.74%</b>        |
| <b>2748</b> | <b>OmniPoint Communications Inc.</b>                | NR-1   | 75%               | 25%  | 13.61%           | 6.10% | <b>11.74%</b>        |
|             |   |        |                   |      |                  |       |                      |
| <b>2552</b> | <b>Fresno MSA Limited Partnership</b>               | NR-2   | 75%               | 25%  | 14.40%           | 6.61% | <b>12.45%</b>        |
| <b>2627</b> | <b>GTE Mobilnet of Santa Barbara L.P.</b>           | NR-2   | 75%               | 25%  | 14.40%           | 6.61% | <b>12.45%</b>        |
| <b>2671</b> | <b>California Rural Service Area #1, Inc.</b>       | NR-2   | 75%               | 25%  | 14.40%           | 6.61% | <b>12.45%</b>        |
| <b>2733</b> | <b>Metro PCS California/Florida, Inc.</b>           | NR-2   | 75%               | 25%  | 14.40%           | 6.61% | <b>12.45%</b>        |
| <b>2745</b> | <b>West Coast P.C.S.</b>                            | NR-2   | 75%               | 25%  | 14.40%           | 6.61% | <b>12.45%</b>        |
|             |   |        |                   |      |                  |       |                      |
|             | <b>Other Wireless Companies</b>                     | NR-3   | 70%               | 30%  | 17.02%           | 7.12% | <b>14.05%</b>        |
|             |   |        |                   |      |                  |       |                      |
|             | <b>Wireless Reseller Companies</b>                  | NR-4   | 65%               | 35%  | 19.63%           | 7.63% | <b>15.43%</b>        |

NR-1: Companies providing wireless service to the largest California service areas

NR-2: Companies providing wireless service to midsize California service areas

NR-3: Other wireless carriers (including Radio Telephone companies)

NR-4: All wireless reseller companies

**2007 Capitalization Rate Study  
Wireless Companies  
Industry Notes**

- Staff relied on the Capital Asset Pricing Model in the development of equity rates. Consideration was given to both the ex post and ex ante risk premiums.
- Consideration was given to size premiums in assigning equity rates to the smaller wireless companies.
- The Discounted Cash Flow model was not relied upon because a majority of the companies in the study are not currently paying dividends.
- The following companies were not included in the 2007 Capitalization Rate Study sample for wireless companies:
  1. Century Tel, Inc. because it no longer provides wireless communications services.
  2. Alamosa Holdings and Ubiquitel Inc., previously affiliates exclusively reselling Sprint Nextel wireless services, were acquired by Sprint Nextel.

**2007 Capitalization Rate Study  
Wireless Companies  
Flotation Cost Adjustment**

| <b>Equity</b> |                  |                     |               | <b>Bond</b>    |                               |                     |               |
|---------------|------------------|---------------------|---------------|----------------|-------------------------------|---------------------|---------------|
| Rating        | Recommended Rate | Flotation Cost in % | Adjusted Rate | Moody's Rating | Recommended Rate <sup>1</sup> | Flotation Cost in % | Adjusted Rate |
| NR-1          | 13.00%           | 4.50%               | 13.61%        | Not Rated      | 6.00%                         | 1.70%               | 6.10%         |
| NR-2          | 13.75%           | 4.50%               | 14.40%        | Not Rated      | 6.50%                         | 1.70%               | 6.61%         |
| NR-3          | 16.25%           | 4.50%               | 17.02%        | Not Rated      | 7.00%                         | 1.70%               | 7.12%         |
| NR-4          | 18.75%           | 4.50%               | 19.63%        | Not Rated      | 7.50%                         | 1.70%               | 7.63%         |

$$\text{Cost of Capital Adjusted for Flotation Costs} = \frac{k_u}{1 - f}$$

Where:  $k_u$  = The cost of capital unadjusted for flotation costs

$f$  = Flotation cost as a percentage of the value of securities issued

<sup>1</sup> Staff reviewed bonds issued by major wireless companies with a presence in the largest markets which revealed a bond rating of A. Based on this, staff concludes that a reasonable debt rate is 6.00% (Moody's A and actual bond issuances), with an increase in the rates for the smaller market categories.

**2007 Capitalization Rate Study  
Wireless Companies  
Summary of Rates of Return**

| Common Equity   |                             | Bonds              |                        |                             |
|---|-----------------------------|--------------------|------------------------|-----------------------------|
| Rating  | Rate of Return <sup>1</sup> | Moody's Bond Yield | Moody's Bond Rating    | Rate of Return <sup>2</sup> |
| NR-1  | 13.00%                      | Aa = 5.75          | Aa2                    | 5.75%                       |
| NR-2  | 13.75%                      |                    | Aa3                    | 5.82%                       |
| NR-3  | 16.25%                      | A = 5.95           | A1                     | 5.88%                       |
| NR-4  | 18.75%                      |                    | A2                     | 5.95%                       |
|   |                             | Baa = 6.18         | A3                     | 6.03%                       |
|   |                             |                    | Baa1                   | 6.10%                       |
|   |                             |                    | Baa2                   | 6.18%                       |
|   |                             |                    | Baa3                   | 6.29%                       |
|   |                             |                    | Ba1                    | 6.39%                       |
|   |                             |                    | Ba2                    | 6.50%                       |
|   |                             |                    | Ba3                    | 6.61%                       |
|   |                             |                    | B1                     | 6.71%                       |
|   |                             |                    | B2                     | 6.82%                       |
|   |                             |                    | B3                     | 6.93%                       |
|   |                             |                    | Caa1                   | 7.03%                       |
|   |                             |                    | Caa2                   | 7.14%                       |
|   |                             |                    | Caa3                   | 7.25%                       |
|   |                             |                    | Ca                     | 7.35%                       |
| <u>Other Debt Rate Considered</u>   |                             |                    | Not Rated <sup>3</sup> |                             |
| Standard & Poor's Bond Yield Index (BBB) - Dec. 2006 Average <sup>4</sup> |                             | 6.10%              |                        |                             |

<sup>1</sup> The Rates of Return on Common Equity were developed by staff based on the relative risk of the utilities in conjunction with the results of the Capital Asset Pricing Models.

<sup>2</sup> The Rates of Return on Bonds were based on Moody's Utility Bond Yields as of December 30, 2006. However, because Moody's assigns a yield only to the groups Aa, A and Baa for bonds, staff interpolates the difference between these groups in order to achieve a refinement of the ratings.

<sup>3</sup> For companies whose bonds are not rated, staff judgment is used in assigning the rates of return because the circumstances or reasons for not rating the bonds or preferred stocks are different for each company.

<sup>4</sup> Rates from Standard & Poor's 2006 Bond Guide Yield Curves dated December 2006, estimated from the graphic representation.



**2007 Capitalization Rate Study**  
**Wireless Companies**  
**Comparison of Return on Common Equity**

|  | Value Line A+, B+, B |        |        |
|--|----------------------|--------|--------|
|  | 2007                 | 2006   | Change |
| E/P Ratio-Mean                               | 5.38%                | 4.92%  | 0.46%  |
| E/P Ratio-Median                             | 5.38%                | 4.44%  | 0.93%  |
| Div Yld + Div Growth-Mean                    | N/A                  | 6.75%  | N/A    |
| Div Yld + Div Growth-Median                  | N/A                  | 4.96%  | N/A    |
| Div Yld + Earn.Growth-Mean                   | 8.86%                | 14.10% | -5.24% |
| Div Yld + Earn.Growth-Median                 | 8.86%                | 15.10% | -6.25% |
| Capital Asset Pricing Model (CAPM) - Ex Ante | 14.60%               | 13.14% | 1.46%  |
| Capital Asset Pricing Model (CAPM) - Ex Post | 12.64%               | 12.40% | 0.24%  |

|   | Ratings |        |                        |                   |
|---|---------|--------|------------------------|-------------------|
|   | NR-1    | NR-2   | Other Carriers<br>NR-3 | Resellers<br>NR-4 |
| 2007 Valuation Division Recommended Rate <sup>1</sup> | 13.00%  | 13.75% | 16.25%                 | 18.75%            |

<sup>1</sup> Staff relied upon the Ex Post and Ex Ante Capital Asset Pricing Model (CAPM) in estimating the recommended equity rates for NR-1 categories. Equity rates for the other non-rated categories were extrapolated based on analyzing the relative risks of operating a wireless system within these categories.

**2007 Capitalization Rate Study**  
**Wireless Companies**  
**Capital Asset Pricing Model - Ex Ante**

| Component   | Industry Computation |
|---|----------------------|
| Expected Future Return, S&P 500 <sup>1</sup>                    | 13.71%               |
| Less: Risk Free Return 25 - 30 Year Treasury Bonds <sup>2</sup> | <u>4.83%</u>         |
| Ex-Ante Risk Premium  | 8.88%                |
| Beta <sup>3</sup>   | <u>1.10</u>          |
| Adjusted Risk Premium   | 9.77%                |
| Risk Free Return 25 - 30 Year Treasury Bonds <sup>2</sup>       | <u>4.83%</u>         |
| Projected Return on Common Equity                               | <u><u>14.60%</u></u> |

<sup>1</sup> Expected Future Return , S&P 500

Dividend Yield for S&P 500 December 29, 2006

5 Year Projected Growth - Merrill Lynch

1.81%

11.90%

13.71%

<sup>2</sup> Wall Street Journal data as of December 29, 2006

<sup>3</sup> Staff's estimate of Beta, see Beta Analysis for further detail

**2007 Capitalization Rate Study**  
**Wireless Companies**  
**Capital Asset Pricing Model - Ex Post**

| Component  | Industry Computation |
|--|----------------------|
| Common Stock Return (1926-2006) <sup>1</sup>                       | 12.30%               |
| Less: Income Return, L/T Government Bonds (1926-2006) <sup>1</sup> | <u>5.20%</u>         |
| Ex-Post Risk Premium   | 7.10%                |
| Beta <sup>2</sup>  | <u>1.10</u>          |
| Adjusted Risk Premium  | 7.81%                |
| Risk Free Return 25 - 30 Year Treasury Bonds <sup>3</sup>          | <u>4.83%</u>         |
| Projected Return on Common Equity                                  | <u><u>12.64%</u></u> |

<sup>1</sup> Ibbotson Associates, Inc. Study

<sup>2</sup> Staff's estimate of Beta, see Beta Analysis for further detail

<sup>3</sup> Wall Street Journal data as of December 29, 2006

**2007 Capitalization Rate Study**  
**Wireless Companies**  
**Equity Rates**

| a          | b                                     | c        | d        | e        | f         | g         | h        | I         | j         | k      | l        | m        |
|------------|---------------------------------------|----------|----------|----------|-----------|-----------|----------|-----------|-----------|--------|----------|----------|
| Value Line |                                       | Stock    | Est.     |          |           | 2007      | Dividend | Estimated | Estimated | E/P    | Div Yld+ | DvYld+   |
| Rating     | Company Name                          | Price    | 2007     | 2006     | 2006      | Estimated | Yield    | Dividend  | Earnings  | Ratio  | DvGwth   | ErnsGwth |
|            |                                       | 12/29/06 | Earnings | Earnings | Dividends | Dividends | (g/c)    | Growth    | Growth    | (d/c)  | (h+i)    | (h+j)    |
| A++        | Alltel Corp.                          | 60.48    | 2.50     | 1.80     | 1.02      | 0.51      | 0.84%    | NMF       | 6.53%     | 4.13%  | N/A      | 7.37%    |
| B+         | Sprint Nextel                         | 18.89    | 1.25     | 0.50     | 0.10      | 0.10      | 0.53%    | NMF       | 9.82%     | 6.62%  | N/A      | 10.34%   |
| B          | U.S. Cellular                         | 69.59    | NMF      | NMF      | NMF       | NMF       | NMF      | NMF       | 20.05%    | N/A    | N/A      | N/A      |
| B          | Telephone & Data Systems <sup>1</sup> | 54.33    | NMF      | NMF      | NMF       | NMF       | NMF      | NMF       | 16.25%    | N/A    | N/A      | N/A      |
| C++        | Dobson Comm.                          | 8.71     | 0.25     | 0.03     | NMF       | NMF       | NMF      | NMF       | 45.50%    | 2.87%  | N/A      | N/A      |
| C+         | Centennial Comm.                      | 7.19     | 0.16     | 0.20     | NMF       | NMF       | NMF      | NMF       | 31.68%    | 2.23%  | N/A      | N/A      |
| C          | Rogers Communications Inc.            | 59.60    | NMF      | NMF      | NMF       | NMF       | NMF      | NMF       | 30.00%    | N/A    | N/A      | N/A      |
| C          | Rural Cellular                        | 13.14    | 3.10     | 6.16     | NMF       | NMF       | NMF      | NMF       | NMF       | 23.59% | N/A      | N/A      |
|            |                                       |          |          |          |           |           |          | N/A       | 22.83%    | 8.59%  | N/A      | 8.86%    |
|            |                                       |          |          |          |           |           |          | N/A       | 20.05%    | 2.55%  | N/A      | 8.86%    |
|            |                                       |          |          |          |           |           |          |           |           |        |          | 9.59%    |

Sources: Columns a, d, e, f, g and i were extracted from Value Line.

Column c extracted from The Wall Street Journal closing prices as of December 29, 2006.

Column j is from the average column of the Long-Term Earnings Growth page.

<sup>1</sup> Parent company of US Cellular

**2007 Capitalization Rate Study**  
**Wireless Companies**  
**Long-Term Earnings Growth**

| a                    | b                                     | c          | d      | e       | f       |
|----------------------|---------------------------------------|------------|--------|---------|---------|
| Value Line<br>Rating | Company Name                          | Value Line | Zacks  | Thomson | Average |
| A++                  | Alltel Corp.                          | NMF        | 6.70%  | 6.35%   | 6.53%   |
| B+                   | Sprint Nextel                         | NMF        | 9.40%  | 10.23%  | 9.82%   |
| B                    | U.S. Cellular                         | NMF        | 20.00% | 20.10%  | 20.05%  |
| B                    | Telephone & Data Systems <sup>1</sup> | NMF        | 16.90% | 15.60%  | 16.25%  |
| C++                  | Dobson Comm.                          | NMF        | 48.20% | 42.80%  | 45.50%  |
| C+                   | Centennial Comm.                      | 2.50%      | 46.30% | 46.25%  | 31.68%  |
| C                    | Rogers Communications Inc.            | NMF        | 30.00% | 30.00%  | 30.00%  |
| C                    | Rural Cellular                        | NMF        | NMF    | NMF     | NMF     |
| <hr/>                |                                       |            |        |         |         |
|                      | Mean                                  | 2.50%      | 25.36% | 24.48%  | 22.83%  |
|                      | Median                                | 2.50%      | 20.00% | 20.10%  | 20.05%  |
|                      | Weighted Average                      |            |        |         | 14.36%  |

<sup>1</sup> Parent company of US Cellular

**2007 Capitalization Rate Study**  
**Wireless Companies**  
**Beta Analysis**

| a   | b                                     | c     | d     | e         | f       | g      | h                 | i           |
|---|---------------------------------------|-------|-------|-----------|---------|--------|-------------------|-------------|
|   |                                       | Value |       | Thomson   |         | Debt   |                   | WTG Avg     |
| Value Line  |                                       | Line  | Zacks | Financial | Average | Equity | Unlevered         | Debt/Equity |
| Rating  | Company Name                          | Beta  | Beta  | Beta      | Beta    | Ratio  | Beta <sup>1</sup> | Ratio       |
| A++   | Alltel Corp.                          | NMF   | 1.11  | 0.69      | 0.90    | 0.12   | 0.84              | 0.03        |
| B+  | Sprint Nextel                         | 1.25  | 1.87  | 1.25      | 1.46    | 0.36   | 1.20              | 0.23        |
| B   | U.S. Cellular                         | 1.15  | 1.07  | 0.58      | 0.93    | 0.19   | 0.84              | 0.01        |
| B   | Telephone & Data Systems <sup>2</sup> | 1.05  | 1.14  | 0.73      | 0.97    | 0.53   | 0.74              | 0.04        |
| Mean  |                                       | 1.15  | 1.30  | 0.81      | 1.07    | 0.30   | 0.90              |             |
| Median  |                                       | 1.15  | 1.13  | 0.71      | 0.95    |        | 0.84              |             |
| Weighted  |                                       |       |       |           | 1.26    |        | 1.06              |             |
| Relevered Beta based on 25% Debt Capital structure and an average beta <sup>3</sup>         |                                       |       |       |           | 1.08    |        |                   |             |
| Relevered Beta based on 25% Debt Capital structure and a weighted average beta <sup>3</sup> |                                       |       |       |           | 1.27    |        |                   |             |

Note: The companies listed above represent less than 40% of the wireless market in the U.S. Other companies that represent the majority of the market are not included because their stock is not listed or they are subsidiaries of larger companies. Therefore, staff's estimate of Beta used for the CAPM is 1.10 for the companies in the NR-1 wireless markets in California.

<sup>1</sup> Unlevered Beta = Beta/[1+(1-t)(D/E)]; where D/E is the debt to equity ratio, t is the tax rate (assumed to be 40%)

<sup>2</sup> Parent company of US Cellular

<sup>3</sup> Relevered Beta = [Unlevered Beta][1+(1-t)(D/E)]; where D/E is the debt to equity ratio, t is the tax rate (assumed to be 40%)

**2007 Capitalization Rate Study**  
**Wireless Companies**  
**Beta Analysis**

| a          | b                          | c     | d     | e         | f       | g      | h                 | i           |
|------------|----------------------------|-------|-------|-----------|---------|--------|-------------------|-------------|
|            |                            | Value |       | Thomson   |         | Debt   |                   | WTG Avg     |
| Value Line |                            | Line  | Zacks | Financial | Average | Equity | Unlevered         | Debt/Equity |
| Rating     | Company Name               | Beta  | Beta  | Beta      | Beta    | Ratio  | Beta <sup>1</sup> | Ratio       |
| C++        | Dobson Comm.               | 1.45  | 5.55  | 2.11      | 3.04    | 1.84   | 1.44              | 0.28        |
| C+         | Centennial Comm.           | 0.95  | 1.31  | 1.24      | 1.17    | 2.82   | 0.43              | 0.29        |
| C          | Rogers Communications Inc. | NMF   | 1.98  | 0.80      | 1.39    | 0.00   | 1.39              | 0.00        |
| C          | Rural Cellular             | 0.90  | 3.01  | 1.25      | 1.72    | 10.01  | 0.25              | 0.74        |
|            | Mean                       | 1.10  | 2.96  | 1.35      | 1.83    | 3.67   | 0.88              |             |
|            | Median                     | 0.95  | 2.50  | 1.25      | 1.56    |        | 0.91              |             |
|            | Weighted                   |       |       |           | 1.64    |        | 1.22              |             |

|  |      |
|--|------|
| Relevered Beta based on 30% Debt Capital structure and an average beta. <sup>2</sup>         | 1.10 |
| Relevered Beta based on 40% Debt Capital structure and an average beta. <sup>2</sup>         | 1.23 |
| Relevered Beta based on 30% Debt Capital structure and a weighted average beta. <sup>2</sup> | 1.53 |
| Relevered Beta based on 40% Debt Capital structure and a weighted average beta. <sup>2</sup> | 1.70 |

Note: The companies listed above represent the smaller resellers and regional wireless market in the U.S. Therefore, to support the rates used for the CAPM for the companies in the NR-3 and NR-4 wireless markets in California, staff estimated a Beta of approximately 1.50 and 1.70, respectively.

<sup>1</sup> Unlevered Beta = Value Line Beta/[1+(1-t)(D/E)]; where D/E is the debt to equity ratio, t is the tax rate (assumed to be 40%)

<sup>2</sup> Relevered Beta = [Unlevered Beta][1+(1-t)(D/E)]; where D/E is the debt to equity ratio, t is the tax rate (assumed to be 40%)

**2007 Capitalization Rate Study**  
**Wireless Companies**  
**Size Premium**

| Decile of the<br>New York Stock Exchange | Equity Market Capitalization<br>(in thousands) |    |            | Size Premium<br>(Return in excess of CAPM) |
|--|--|----|------------|--|
| 1  | over   |    | 14,096,886 | -0.37                                      |
| 2  | 6,241,953                                      | to | 14,096,886 | 0.60                                       |
| 3  | 3,464,104                                      | to | 6,241,953  | 0.75                                       |
| 4  | 2,231,707                                      | to | 3,464,104  | 1.07                                       |
| 5  | 1,607,854                                      | to | 2,231,707  | 1.44                                       |
| 6  | 1,097,603                                      | to | 1,607,854  | 1.75                                       |
| 7  | 746,219  | to | 1,097,603  | 1.61                                       |
| 8  | 505,437  | to | 746,219    | 2.36                                       |
| 9  | 262,725  | to | 505,437    | 2.86                                       |
| 10                                       | under  |    | 262,725    | 6.41                                       |

Source: SBBI:Valuation Edition 2005 Yearbook, Table 2



**2007 Capitalization Rate Study**  
**Wireless Companies**  
**Capital Structure**

| a                    | b                                  | c                    | d                          | e                              | f                                  | g                                 | h   | i                         | j                           | k                          |
|----------------------|------------------------------------|----------------------|----------------------------|--------------------------------|------------------------------------|-----------------------------------|---|---------------------------|-----------------------------|----------------------------|
| Value Line<br>Rating | Company Name                       | Common Equity        |                            |                                | Preferred<br>Stock<br>(\$Millions) | Long-Term<br>Debt<br>(\$Millions) | Total<br>Capital<br>(\$Millions)<br>(e+f+g) | Ratios                    |                             |                            |
|                      |                                    | Shares<br>(Millions) | Stock<br>Price<br>12/29/06 | Total<br>(\$Millions)<br>(c*d) |                                    |                                   |   | Common<br>Equity<br>(e/h) | Preferred<br>Stock<br>(f/h) | Long-Term<br>Debt<br>(g/h) |
| A++                  | Alltel Corp.                       | 373.63               | 60.48                      | 22,597.14                      | 0.26                               | 2,711.60                          | 25,309.00                                   | 89.28%                    | 0.00%                       | 10.71%                     |
| B+                   | Sprint Nextel                      | 2,894.90             | 18.89                      | 54,684.66                      | -                                  | 19,643.00                         | 74,327.66                                   | 73.57%                    | 0.00%                       | 26.43%                     |
| B                    | U.S. Cellular                      | 87.20                | 69.59                      | 6,068.25                       | -                                  | 1,161.40                          | 7,229.65                                    | 83.94%                    | 0.00%                       | 16.06%                     |
| B                    | Telephone & Data Sys. <sup>1</sup> | 115.66               | 54.33                      | 6,283.81                       | 3.90                               | 3,340.80                          | 9,628.51                                    | 65.26%                    | 0.04%                       | 34.70%                     |
|                      |                                    |                      |                            |                                |                                    | Totals                            | 116,494.82                                  |                           |                             |                            |
|                      |                                    |                      |                            |                                |                                    |                                   | Mean  | 78.01%                    | 0.01%                       | 21.98%                     |
|                      |                                    |                      |                            |                                |                                    |                                   | Median                                      | 78.75%                    | 0.00%                       | 21.25%                     |
|                      |                                    |                      |                            |                                |                                    |                                   | Weighted Average                            | 76.94%                    | 0.00%                       | 23.05%                     |
| C++                  | Dobson Comm.                       | 170.55               | 8.71                       | 1,485.49                       | 135.70                             | 2,596.50                          | 4,217.69                                    | 35.22%                    | 3.22%                       | 61.56%                     |
| C+                   | Centennial Comm.                   | 105.34               | 7.19                       | 757.39                         | -                                  | 2,137.90                          | 2,895.29                                    | 26.16%                    | 0.00%                       | 73.84%                     |
| C                    | Rogers Communications Inc.         | 317.36               | 59.60                      | 18,914.66                      | -                                  | 6.57                              | 18,921.23                                   | 99.97%                    | 0.00%                       | 0.03%                      |
| C                    | Rural Cellular                     | 14.27                | 13.14                      | 187.51                         | 504.70                             | 1,371.90                          | 2,064.11                                    | 9.08%                     | 24.45%                      | 66.46%                     |
|                      |                                    |                      |                            |                                |                                    | Totals                            | 28,098.32                                   |                           |                             |                            |
|                      |                                    |                      |                            |                                |                                    |                                   | Mean  | 42.61%                    | 6.92%                       | 50.48%                     |
|                      |                                    |                      |                            |                                |                                    |                                   | Median                                      | 30.69%                    | 1.61%                       | 64.01%                     |
|                      |                                    |                      |                            |                                |                                    |                                   | Weighted Average                            | 75.97%                    | 2.28%                       | 21.76%                     |

Sources: Columns a, b, c, f and g were extracted from the December 29, 2006 Value Line.  
No Value Line rating information available for Rogers Communications Inc. Rating for this company is estimated from published financials as of September 30, 2006.  
Column d obtained from The Wall Street Journal closing prices as of December 29, 2006.

<sup>1</sup> Parent company of US Cellular.

**California State Board of Equalization  
State-Assessed Properties Division  
2007 Capitalization Rate Study  
Pipeline Companies**

| SBE No.    | Company Name                                  | Ratings   |      | Capital Structure |      | Rates of Return |       | Basic<br>Cap<br>Rate |
|------------|---|-----------|------|-------------------|------|-----------------|-------|----------------------|
|            |   | Financial | Bond | Common<br>Equity  | Debt | Equity          | Debt  |                      |
| <b>402</b> | <b>CALNEV Pipe Line LLC</b>                   | NR-1      | NR-b | 70%               | 30%  | 12.57%          | 6.45% | 10.73%               |
| <b>461</b> | <b>SFPP, L.P.</b>                             | NR-1      | NR-b | 70%               | 30%  | 12.57%          | 6.45% | 10.73%               |
| <b>479</b> | <b>Chevron Pipeline Company</b>               | NR-2      | NR-b | 70%               | 30%  | 13.09%          | 6.45% | 11.10%               |
| <b>468</b> | <b>Shell California Pipeline Company L.P.</b> | NR-2      | NR-b | 70%               | 30%  | 13.09%          | 6.45% | 11.10%               |
| <b>486</b> | <b>Pacific Pipeline System, LLC</b>           | NR-2      | NR-b | 70%               | 30%  | 13.09%          | 6.45% | 11.10%               |
| <b>480</b> | <b>ConocoPhillips Pipe Line Company</b>       | NR-2      | NR-b | 70%               | 30%  | 13.09%          | 6.45% | 11.10%               |
|            | <b>Other Pipeline Companies</b>               | NR-3      | NR-c | 70%               | 30%  | 14.14%          | 7.47% | 12.14%               |

**2007 Capitalization Rate Study  
Pipeline Companies  
Industry Notes**

- Staff relied primarily on the Discounted Cash Flow model in the development of equity rates.
- In assigning equity rates to smaller pipeline companies, the size premium information from Ibbotson and Associates was considered.

**2007 Capitalization Rate Study  
Pipeline Companies  
Flotation Cost Adjustment**

| <b>Equity</b>        |                     |                        |                  | <b>Debt</b>       |                     |                        |                  |
|----------------------|---------------------|------------------------|------------------|-------------------|---------------------|------------------------|------------------|
| Value Line<br>Rating | Recommended<br>Rate | Flotation Cost<br>in % | Adjusted<br>Rate | Moody's<br>Rating | Recommended<br>Rate | Flotation Cost<br>in % | Adjusted<br>Rate |
| NR-1                 | 12.00%              | 4.50%                  | 12.57%           | NR-b              | 6.35%               | 1.70%                  | 6.45%            |
| NR-2                 | 12.50%              | 4.50%                  | 13.09%           | NR-c              | 7.35%               | 1.70%                  | 7.47%            |
| NR-3                 | 13.50%              | 4.50%                  | 14.14%           |                   |                     |                        |                  |

$$\text{Cost of Capital Adjusted for Flotation Costs} = \frac{k_u}{1 - f}$$

Where:  $k_u$  = The cost of capital unadjusted for flotation costs

$f$  = Flotation cost as a percentage of the value of securities issued

NR-1: Not-Rated-1 pipelines are not directly traded because they are subsidiaries of larger companies. These are larger common carrier pipelines transmitting refined petroleum products.

NR-2: Not-Rated-2 pipelines are not directly traded because they are subsidiaries of larger companies. These are larger common carrier pipelines transmitting crude oil.

NR-3: Not-Rated-3 pipelines are smaller companies transporting petroleum products or crude oil.

NR-b: Although these companies do not have rated debt securities, the rating class "Baa" was chosen to represent these subsidiaries of larger corporations.

NR-c: Issues of this size are not normally rated. An additional increment of 100 basis points (before flotation costs) has been added to the "Baa" rate.

**2007 Capitalization Rate Study**  
**Pipeline Companies**  
**Comparison of Return on Common Equity**

| Description                                  | 2007   | 2006   | Change |
|--|--------|--------|--------|
| E/P Ratio - Mean                             | 5.06%  | 5.21%  | -0.15% |
| E/P Ratio - Median                           | 5.02%  | 4.92%  | 0.10%  |
| Dividend Yield + Dividend Growth - Mean      | 10.87% | 12.11% | -1.24% |
| Dividend Yield + Dividend Growth - Median    | 10.95% | 12.08% | -1.13% |
| Dividend Yield + Earnings Growth - Mean      | 11.44% | 12.65% | -1.21% |
| Dividend Yield + Earnings Growth - Median    | 12.38% | 13.28% | -0.90% |
| Capital Asset Pricing Model (CAPM) - Ex Ante | 8.83%  | 8.24%  | 0.59%  |
| Capital Asset Pricing Model (CAPM) - Ex Post | 8.03%  | 7.93%  | 0.10%  |

2007 recommended equity rates:

**12.00%** for Common Carrier product lines

**12.50%** for Common Carrier crude oil lines

**13.50%** for all other pipelines

**2007 Capitalization Rate Study**  
**Pipeline Companies**  
**Equity Rates**

| a          | b                                   | c                | d        | e         | f       | g        | h         | i         | j     | k        | l         |
|------------|-------------------------------------|------------------|----------|-----------|---------|----------|-----------|-----------|-------|----------|-----------|
| Value Line |                                     | Stock            | 2006     | 2006      | 2007    | 2007     | 2007      | 2007      | E/P   | Div Yld+ | Div Yld+  |
| Rating     | Company Name                        | Price            | Earnings | Dividends | Est Div | Dividend | Hist. Div | Avg. Erns | Ratio | Div Gwth | Erns Gwth |
|            |                                     | 12/29/06         |          |           |         | Yield    | Growth    | Growth    | (d/c) | (g+h)    | (g+i)     |
| B++        | Enbridge Energy                     | 49.39            | 2.98     | 3.70      | 3.70    | 7.49%    | 1.50%     | -0.35%    | 6.03% | 8.99%    | 7.14%     |
| B+         | Buckeye Partners, L.P.              | 46.48            | 2.65     | 3.03      | 3.23    | 6.95%    | 5.50%     | 4.58%     | 5.70% | 12.45%   | 11.53%    |
| B+         | Kinder Morgan Energy Partners, L.P. | 47.90            | 2.00     | 3.25      | 3.40    | 7.10%    | 5.50%     | 6.77%     | 4.18% | 12.60%   | 13.86%    |
| B          | TEPPCO Partners, L.P.               | 40.31            | 1.75     | 2.70      | 2.80    | 6.95%    | 2.50%     | 6.29%     | 4.34% | 9.45%    | 13.23%    |
|            |                                     | Mean             |          |           |         |          | 3.75%     | 4.32%     | 5.06% | 10.87%   | 11.44%    |
|            |                                     | Median           |          |           |         |          | 4.00%     | 5.44%     | 5.02% | 10.95%   | 12.38%    |
|            |                                     | Weighted Average |          |           |         |          |           |           |       |          | 12.17%    |

Sources: Columns a, d, e, f and h were extracted from Value Line.  
Column c was extracted from the Yahoo Market Guide.  
Column i is an average of Value Line, Zacks, and Thomson.

**2007 Capitalization Rate Study  
Pipeline Companies  
Long Term Earnings Growth**

| a                    | b                                   | c          | d     | e       | f       |
|----------------------|-------------------------------------|------------|-------|---------|---------|
| Value Line<br>Rating | Company Name                        | Value Line | Zacks | Thomson | Average |
| B++                  | Enbridge Energy                     | -8.50%     | 3.70% | 3.75%   | -0.35%  |
| B+                   | Buckeye Partners, L.P.              | 5.50%      | 4.00% | 4.25%   | 4.58%   |
| B+                   | Kinder Morgan Energy Partners, L.P. | 6.00%      | 6.80% | 7.50%   | 6.77%   |
| B                    | TEPPCO Partners, L.P.               | 9.00%      | 5.00% | 4.86%   | 6.29%   |
|                      | Mean                                | 3.00%      | 4.88% | 5.09%   | 4.32%   |
|                      | Median                              | 5.75%      | 4.50% | 4.56%   | 5.44%   |
|                      | Weighted Average                    |            |       |         | 5.03%   |

**2007 Capitalization Rate Study**  
**Pipeline Companies**  
**Capital Asset Pricing Model - Ex Ante**

| Component   | Industry Computation |
|---|----------------------|
| Expected Future Return, S&P 500 <sup>1</sup>                    | 13.71%               |
| Less: Risk Free Return 25 - 30 Year Treasury Bonds <sup>2</sup> | 4.83%                |
| Risk Premium  | 8.88%                |
| Beta <sup>3</sup>   | 0.45                 |
| Adjusted Risk Premium   | 4.00%                |
| Risk Free Return 25 - 30 Year Treasury Bonds <sup>2</sup>       | 4.83%                |
| Projected Return on Common Equity                               | 8.83%                |

<sup>1</sup> Dividend Yield for S&P 500 December 29, 2006      1.81%  
5 Year projected growth per Merrill Lynch      11.90%  
Expected future return, S&P 500      13.71%

<sup>2</sup> Wall Street Journal December 29, 2006

<sup>3</sup> Weighted average using betas from Value Line, Zacks, and Standard & Poor for a representative sample of pipeline companies.



**2007 Capitalization Rate Study**  
**Pipeline Companies**  
**Capital Asset Pricing Model - Ex Post**

| Component   | Industry Computation |
|---|----------------------|
| Common Stock Return (1926 - 2006) <sup>1</sup>            | 12.30%               |
| Less: Long Term Government Bonds <sup>1</sup>             | 5.20%                |
| Risk Premium  | 7.10%                |
| Beta <sup>2</sup>   | 0.45                 |
| Adjusted Risk Premium                                     | 3.20%                |
| Risk Free Return 25 - 30 Year Treasury Bonds <sup>3</sup> | 4.83%                |
| Projected Return on Common Equity                         | 8.03%                |

<sup>1</sup> Ibbotson Associates Study

<sup>2</sup> Weighted average using betas from Value Line, Zacks, and Standard & Poor for a representative sample of pipeline companies

<sup>3</sup> Wall Street Journal December 29, 2006

**2007 Capitalization Rate Study  
Pipeline Companies  
Beta Analysis**

| a                    | b  | c                     | d             | e                            | f               | g                       | h                              | i                               |
|----------------------|--|-----------------------|---------------|------------------------------|-----------------|-------------------------|--------------------------------|---------------------------------|
| Value Line<br>Rating | Company Name   | Value<br>Line<br>Beta | Zacks<br>Beta | Standard<br>& Poor's<br>Beta | Average<br>Beta | Debt<br>Equity<br>Ratio | Unlevered<br>Beta <sup>1</sup> | WTG Avg<br>Debt/Equity<br>Ratio |
| B+                   | Buckeye Partners, L.P.   | 0.75                  | 0.27          | 0.24                         | 0.42            | 0.53                    | 0.32                           | 0.07                            |
| B+                   | Kinder Morgan Energy Partners, L.P.  | 0.70                  | 0.43          | 0.32                         | 0.48            | 0.40                    | 0.39                           | 0.27                            |
| B                    | TEPPCO Partners, L.P.  | 0.70                  | 0.23          | 0.15                         | 0.36            | 0.48                    | 0.28                           | 0.10                            |
|                      | Mean   | 0.72                  | 0.31          | 0.24                         | 0.42            | 0.47                    | 0.33                           |                                 |
|                      | Median   | 0.70                  | 0.27          | 0.24                         | 0.42            |                         | 0.32                           |                                 |
|                      | Weighted Average   |                       |               |                              | 0.45            |                         | 0.36                           |                                 |
|                      | Relevered beta based on 30% Debt Capital Structure                             |                       |               |                              |                 |                         | 0.41 <sup>2</sup>              |                                 |
|                      | Relevered beta based on 30% Debt Capital Structure and a weighted average beta |                       |               |                              |                 |                         | 0.45 <sup>2</sup>              |                                 |

Note: Enbridge Energy was not included because no meaningful beta information was available from Zacks and Standard and Poor's.

<sup>1</sup> Unlevered Beta = Beta/[1+(1-t)(D/E)]; where D/E is the debt to equity ratio, t is the tax rate (assumed to be 40%)

<sup>2</sup> Relevered Beta = [Unlevered Beta][1+(1-t)(D/E)]; where D/E is the debt to equity ratio, t is the tax rate (assumed to be 40%)

**2007 Capitalization Rate Study  
Pipeline Companies  
Capital Structure**

| a                    | b                       | c                                   | d  | e                         | f                                  | g                                     | h                          | i                         | j                      | k              | l           |
|----------------------|-------------------------|-------------------------------------|--|---------------------------|------------------------------------|---------------------------------------|----------------------------|---------------------------|------------------------|----------------|-------------|
| Value Line<br>Rating | Moody<br>Bond<br>Rating | Company Name                        | Partnership<br>Units<br>Outstanding<br>(000) | Unit<br>Price<br>12/29/06 | Market<br>Value<br>Equity<br>(000) | Market<br>Value<br>Preferred<br>(000) | Long Term<br>Debt<br>(000) | Total<br>Capital<br>(000) | Long Term<br>Debt<br>% | Preferred<br>% | Equity<br>% |
| B++                  | NR                      | Enbridge Energy                     | 77,162                                       | 49.39                     | 3,811,011                          | 0                                     | 1,961,400                  | 5,772,411                 | 33.98%                 | 0.00%          | 66.02%      |
| B+                   | NR                      | Buckeye Partners, L.P.              | 39,676                                       | 46.48                     | 1,844,122                          | 0                                     | 981,100                    | 2,825,222                 | 34.73%                 | 0.00%          | 65.27%      |
| B+                   | NR                      | Kinder Morgan Energy Partners, L.P. | 229,234                                      | 47.90                     | 10,980,318                         | 0                                     | 4,431,500                  | 15,411,818                | 28.75%                 | 0.00%          | 71.25%      |
| B                    | NR                      | TEPPCO Partners, L.P.               | 75,714                                       | 40.31                     | 3,052,011                          | 0                                     | 1,472,100                  | 4,524,111                 | 32.54%                 | 0.00%          | 67.46%      |
|                      |                         | Total                               |  |                           | 19,687,463                         | 0                                     | 8,846,100                  | 28,533,563                |                        |                |             |
|                      |                         | Mean                                |  |                           |                                    |                                       |                            |                           | 32.50%                 | 0.00%          | 67.50%      |
|                      |                         | Median                              |  |                           |                                    |                                       |                            |                           | 33.26%                 | 0.00%          | 66.74%      |
|                      |                         | Weighted Average                    |  |                           |                                    |                                       |                            |                           | 31.00%                 | 0.00%          | 69.00%      |

Recommended Capital Structure for Common Carrier Pipelines for lien date January 1, 2007:

Debt - 30%

Equity - 70%

Sources: Columns a, d, g and h were extracted from Value Line.

Column b was extracted from the 2006 Moody's Public Utility and Industrial Manuals.

Column e was extracted from the Yahoo Market Guide.

**2007 Capitalization Rate Study  
Pipeline Companies  
Debt Yield Rate**

Average of Industrial and Public Utility Bond Yield:

|     |                            |       |        |
|-----|----------------------------|-------|--------|
| Aa  | Industrial/Utility Average | 5.72% |        |
| A   | Industrial/Utility Average | 5.92% |        |
|     |                            | 5.72% | Aa     |
|     |                            | 5.92% | A      |
| Baa | Industrial/Utility Average | 6.35% |        |
|     | Recommended                | 6.35% | Baa/Ba |

|  | Bond Rating | Industrial | Public<br>Utility | 2007<br>Average |
|--|-------------|------------|-------------------|-----------------|
|  | Aaa         | 5.46%      | N/A               | 5.46%           |
|  | Aa          | 5.68%      | 5.75%             | 5.72%           |
|  | A           | 5.89%      | 5.95%             | 5.92%           |
|  | Baa         | 6.51%      | 6.18%             | 6.35%           |

**2007 Capitalization Rate Study**  
**Pipeline Companies**  
**Size Premium**

| Decile of the<br>New York Stock Exchange | Equity Market Capitalization<br>(in thousands) |    |            | Size Premium<br>(Return in excess of CAPM) |
|--|--|----|------------|--|
| 1  | 14,096,886                                     | to | over       | -0.37                                      |
| 2  | 6,241,953                                      | to | 14,096,886 | 0.60                                       |
| 3  | 3,464,104                                      | to | 6,241,953  | 0.75                                       |
| 4  | 2,231,707                                      | to | 3,464,104  | 1.07                                       |
| 5  | 1,607,851                                      | to | 2,231,707  | 1.44                                       |
| 6  | 1,097,603                                      | to | 1,607,851  | 1.75                                       |
| 7  | 746,219  | to | 1,097,603  | 1.61                                       |
| 8  | 505,437  | to | 746,219    | 2.36                                       |
| 9  | 262,725  | to | 505,437    | 2.86                                       |
| 10                                       | under  |    | 262,725    | 6.41                                       |

Source: SBBI: Valuation Edition 2005 Yearbook, Table 2

**California State Board of Equalization  
State-Assessed Properties Division  
2007 Capitalization Rate Study  
Railroad Companies**

| SBE<br>No. | Company<br>Name  | Ratings   |      | Capital Structure |      | Rates of Return  |       | Basic<br>Cap<br>Rate |
|------------|--|-----------|------|-------------------|------|------------------|-------|----------------------|
|            |  | Financial | Bond | Common<br>Equity  | Debt | Common<br>Equity | Debt  |                      |
| <b>843</b> | <b>Union Pacific Railroad Company</b>                    | A         | Baa2 | 75%               | 25%  | 13.87%           | 6.45% | <b>12.02%</b>        |
| <b>804</b> | <b>BNSF Railway Company</b>                              | B++       | Baa2 | 75%               | 25%  | 13.87%           | 6.45% | <b>12.02%</b>        |
| <b>802</b> | <b>Central Oregon &amp; Pacific Railroad</b>             | NR-1      | NR-1 | 60%               | 40%  | 15.97%           | 7.98% | <b>12.77%</b>        |
| <b>810</b> | <b>California Northern Railroad</b>                      | NR-1      | NR-1 | 60%               | 40%  | 15.97%           | 7.98% | <b>12.77%</b>        |
| <b>813</b> | <b>Pacific Harbor Lines</b>                              | NR-1      | NR-1 | 60%               | 40%  | 15.97%           | 7.98% | <b>12.77%</b>        |
| <b>850</b> | <b>Modesto &amp; Empire Traction Company</b>             | NR-1      | NR-1 | 60%               | 40%  | 15.97%           | 7.98% | <b>12.77%</b>        |
| <b>865</b> | <b>San Diego &amp; Imperial Valley Railroad Co. Inc.</b> | NR-1      | NR-1 | 60%               | 40%  | 15.97%           | 7.98% | <b>12.77%</b>        |
| <b>882</b> | <b>Trona Railway Co.</b>                                 | NR-1      | NR-1 | 60%               | 40%  | 15.97%           | 7.98% | <b>12.77%</b>        |
| <b>897</b> | <b>San Joaquin Valley Railroad Company</b>               | NR-1      | NR-1 | 60%               | 40%  | 15.97%           | 7.98% | <b>12.77%</b>        |
| <b>899</b> | <b>Arizona &amp; California Railroad</b>                 | NR-1      | NR-1 | 60%               | 40%  | 15.97%           | 7.98% | <b>12.77%</b>        |
|            | <b>Other Railroad Companies</b>                          | NR-2      | NR-2 | 60%               | 40%  | 16.23%           | 9.00% | <b>13.34%</b>        |

**2007 Capitalization Rate Study  
Railroad Companies  
Industry Notes**

- Staff relied upon the results of the following models in the development of equity rates:
  1. Discounted Cash Flow
  2. Capital Asset Pricing Model - Consideration was given to both the ex post and ex ante risk premiums

For 2007, staff increased the common capital structure equity from 70% last year to 75% this year to reflect the increased equity in industry capital structures as reflected in the sample.

**2007 Capitalization Rate Study  
Railroad Companies  
Flotation Cost Adjustment**

| <b>Equity</b>           |                     |                           |                  | <b>Debt</b>       |                     |                           |                  |
|-------------------------|---------------------|---------------------------|------------------|-------------------|---------------------|---------------------------|------------------|
| Value<br>Line<br>Rating | Recommended<br>Rate | Flotation<br>Cost<br>In % | Adjusted<br>Rate | Moody's<br>Rating | Recommended<br>Rate | Flotation<br>Cost<br>In % | Adjusted<br>Rate |
| B++, B+                 | 13.25%              | 4.50%                     | 13.87%           | Baa2              | 6.35%               | 1.70%                     | 6.45%            |
| NR-1                    | 15.25%              | 4.50%                     | 15.97%           | NR-1 <sup>1</sup> | 7.85%               | 1.70%                     | 7.98%            |
| NR-2                    | 15.50%              | 4.50%                     | 16.23%           | NR-2 <sup>2</sup> | 8.85%               | 1.70%                     | 9.00%            |

$$\text{Cost of Capital Adjusted for Flotation Costs} = \frac{k_u}{1 - f}$$

Where:  $k_u$  = The cost of capital unadjusted for flotation costs

$f$  = Flotation cost as a percentage of the value of securities issued

<sup>1</sup> NR-1: Represent short line railroad companies with stable historical income. An additional 150 basis points (1.5%) were added to the Baa2 bond rate to represent the additional risk premium.

<sup>2</sup> NR-2: Represent short line railroad companies without stable historical income patterns. An additional 250 basis points (2.5%) were added to the Baa2 bond rate to represent the additional risk premium.



**2007 Capitalization Rate Study  
Railroad Companies  
Comparison of Equity Rates**

| Description  | 2007   | 2006   | Change |
|--|--------|--------|--------|
| E/P Ratio - Mean                                   | 7.54%  | 6.60%  | 0.94%  |
| E/P Ratio - Median                                 | 7.47%  | 6.63%  | 0.84%  |
| Dividend Yield + Dividend Growth - Mean            | 13.83% | 12.74% | 1.09%  |
| Dividend Yield + Dividend Growth - Median          | 14.67% | 13.12% | 1.55%  |
| Dividend Yield + Earnings Growth - Mean            | 17.13% | 16.44% | 0.69%  |
| Dividend Yield + Earnings Growth - Median          | 17.18% | 16.94% | 0.24%  |
| Capital Asset Pricing Model - Ex post              | 11.05% | 11.34% | -0.29% |
| Capital Asset Pricing Model - Ex ante              | 12.61% | 11.97% | 0.64%  |
| State Assessed Properties Division Recommendation: | 13.25% | 13.25% | 0.00%  |

**2007 Capitalization Rate Study**  
**Railroad Companies**  
**Equity Rates**

| a                         | b                            | c                          | d                              | e                | f                 | g               | h                          | i                                 | j                           | k                     | l                             | m                              |
|---------------------------|------------------------------|----------------------------|--------------------------------|------------------|-------------------|-----------------|----------------------------|-----------------------------------|-----------------------------|-----------------------|-------------------------------|--------------------------------|
| Value Line<br>Rating      | Company<br>Name              | Stock<br>Price<br>12/29/06 | Est Erns<br>Value Line<br>2007 | Earnings<br>2006 | Dividends<br>2006 | Est Div<br>2007 | Div Yield<br>2007<br>(g/c) | ValueLine<br>Dividend<br>Est Gwth | Average<br>Est Erns<br>Gwth | E/P<br>Ratio<br>(d/c) | Div Yld +<br>Dv Gwth<br>(h+i) | Dv Yld +<br>Erns Gwth<br>(h+j) |
| <b>Class 1 Railroads:</b> |                              |                            |                                |                  |                   |                 |                            |                                   |                             |                       |                               |                                |
| A                         | Union Pacific Corp.          | 92.02                      | 6.70                           | 5.70             | 1.20              | 1.20            | 1.30%                      | 4.50%                             | 14.65%                      | 7.28%                 | 5.80%                         | 15.96%                         |
| B++                       | Burlington Northern Santa Fe | 73.81                      | 5.65                           | 5.00             | 0.90              | 1.00            | 1.35%                      | 11.00%                            | 15.18%                      | 7.65%                 | 12.35%                        | 16.53%                         |
| B++                       | CSX Corp.                    | 34.43                      | 2.50                           | 2.25             | 0.33              | 0.40            | 1.16%                      | 19.00%                            | 17.04%                      | 7.26%                 | 20.16%                        | 18.20%                         |
| B+                        | Norfolk Southern Corp.       | 50.29                      | 4.00                           | 3.60             | 0.68              | 0.75            | 1.49%                      | 15.50%                            | 16.34%                      | 7.95%                 | 16.99%                        | 17.83%                         |
| Mean                      |                              |                            |                                |                  |                   |                 | 1.33%                      | 12.50%                            | 15.80%                      | 7.54%                 | 13.83%                        | 17.13%                         |
| Median                    |                              |                            |                                |                  |                   |                 | 1.33%                      | 13.25%                            | 15.76%                      | 7.47%                 | 14.67%                        | 17.18%                         |
| Weighted Average          |                              |                            |                                |                  |                   |                 |                            |                                   |                             |                       | 12.99%                        | 16.98%                         |

Sources: Columns a, d, e, f, g and i were extracted from Value Line.

Column c was extracted from the Yahoo Market Guide.

Column j is an average of Value Line, Zacks, and Thomson.

**2007 Capitalization Rate Study  
Railroad Companies  
Long Term Earnings Growth**

| a                         | b                            | c             | d      | e       | f       |
|---------------------------|------------------------------|---------------|--------|---------|---------|
| Value Line<br>Rating      | Company Name                 | Value<br>Line | Zacks  | Thomson | Average |
| <b>Class 1 Railroads:</b> |                              |               |        |         |         |
| A                         | Union Pacific Corp.          | 13.00%        | 15.70% | 15.26%  | 14.65%  |
| B++                       | Burlington Northern Santa Fe | 16.00%        | 14.20% | 15.33%  | 15.18%  |
| B++                       | CSX Corp.                    | 17.50%        | 16.20% | 17.42%  | 17.04%  |
| B+                        | Norfolk Southern Corp.       | 18.00%        | 15.00% | 16.03%  | 16.34%  |
|                           | Mean                         | 16.13%        | 15.28% | 16.01%  | 15.80%  |
|                           | Median                       | 16.75%        | 15.35% | 15.68%  | 15.76%  |
|                           | Weighted Average             |               |        |         | 15.64%  |

**2007 Capitalization Rate Study  
Railroad Companies  
Capital Asset Pricing Model - Ex Ante**

| Component   | Industry Computation |
|---|----------------------|
| Expected Future Return, S&P 500 <sup>1</sup>                    | 13.71%               |
| Less: Risk Free Return 25 - 30 Year Treasury Bonds <sup>2</sup> | 4.83%                |
| Risk Premium  | 8.88%                |
| Beta  | 0.88                 |
| Adjusted Risk Premium   | 7.78%                |
| Risk Free Return 25 - 30 Year Treasury Bonds <sup>2</sup>       | 4.83%                |
| Projected Return on Common Equity                               | 12.61%               |

|   |        |
|---|--------|
| <sup>1</sup> Dividend Yield for S&P 500 December 29, 2006 | 1.81%  |
| 5 Year projected growth per Merrill Lynch                 | 11.90% |
| Expected future return, S&P 500                           | 13.71% |

<sup>2</sup> Wall Street Journal as of December 29, 2006

**2007 Capitalization Rate Study  
Railroad Companies  
Capital Asset Pricing Model - Ex Post**

| Component   | Industry Computation |
|---|----------------------|
| Common Stock Return (1926 - 2006) <sup>1</sup>            | 12.30%               |
| Less: Long Term Government Bonds <sup>1</sup>             | 5.20%                |
| Risk Premium  | 7.10%                |
| Beta  | 0.88                 |
| Adjusted Risk Premium                                     | 6.22%                |
| Risk Free Return 25 - 30 Year Treasury Bonds <sup>2</sup> | 4.83%                |
| Projected Return on Common Equity                         | 11.05%               |

<sup>1</sup> Ibbotson Associates Study

<sup>2</sup> Wall Street Journal as of December 29, 2006

**2007 Capitalization Rate Study  
Railroad Companies  
Beta Analysis**

| a                             | b  | c                     | d              | e                            | f               | g                       | h                              | i                               |
|-------------------------------|--|-----------------------|----------------|------------------------------|-----------------|-------------------------|--------------------------------|---------------------------------|
| Value Line<br>Rating          | Company Name   | Value<br>Line<br>Beta | Zack's<br>Beta | Standard<br>& Poor's<br>Beta | Average<br>Beta | Debt<br>Equity<br>Ratio | Unlevered<br>Beta <sup>1</sup> | WTG Avg<br>Debt/Equity<br>Ratio |
| <b>Class 1 Railroads:</b>     |  |                       |                |                              |                 |                         |                                |                                 |
| A                             | Union Pacific Corp.  | 0.90                  | 0.68           | 0.70                         | 0.76            | 0.27                    | 0.65                           | 0.08                            |
| B++                           | Burlington Northern Santa Fe   | 0.95                  | 0.82           | 0.85                         | 0.87            | 0.25                    | 0.76                           | 0.07                            |
| B++                           | CSX Corp.  | 0.95                  | 0.98           | 1.00                         | 0.98            | 0.33                    | 0.82                           | 0.06                            |
| B+                            | Norfolk Southern Corp.   | 1.00                  | 0.74           | 0.82                         | 0.85            | 0.31                    | 0.72                           | 0.07                            |
|                               | Mean   | 0.95                  | 0.81           | 0.84                         | 0.87            | 0.29                    | 0.74                           |                                 |
|                               | Median   | 0.95                  | 0.78           | 0.84                         | 0.86            |                         | 0.74                           |                                 |
|                               | Weighted Average   |                       |                |                              | 0.85            |                         | 0.73                           | 0.28                            |
|                               | Relevered Beta based on 25% Debt Capital Structure                             |                       |                |                              |                 | 0.89 <sup>2</sup>       |                                |                                 |
|                               | Relevered Beta based on 25% Debt Capital Structure and a weighted average Beta |                       |                |                              |                 | 0.88 <sup>2</sup>       |                                |                                 |
| <b>Non-Class 1 Railroads:</b> |  |                       |                |                              |                 |                         |                                |                                 |
| B+                            | Genesee and Wyoming  | 1.20                  | 1.19           | 1.18                         | 1.19            | 0.21                    | 1.06                           | 0.12                            |
| B                             | Rail America, Inc.   | 1.20                  | 1.52           | N/A                          | 1.36            | 0.63                    | 0.99                           | 0.27                            |
|                               | Mean   | 1.20                  | 1.36           | 1.18                         | 1.28            | 0.42                    | 1.02                           |                                 |
|                               | Median   | 1.20                  | 1.36           | 1.18                         | 1.28            |                         | 1.02                           |                                 |
|                               | Weighted Average   |                       |                |                              | 1.26            |                         | 1.03                           | 0.39                            |
|                               | Relevered Beta based on 40% Debt Capital Structure                             |                       |                |                              |                 | 1.43 <sup>2</sup>       |                                |                                 |
|                               | Relevered Beta based on 40% Debt Capital Structure and a weighted average Beta |                       |                |                              |                 | 1.44 <sup>2</sup>       |                                |                                 |

<sup>1</sup> Unlevered Beta = Beta/[1+(1-t)(D/E)]; where D/E is the debt to equity ratio, t is the tax rate (assumed to be 40%)

<sup>2</sup> Relevered Beta = [Unlevered Beta][1+(1-t)(D/E)]; where D/E is the debt to equity ratio, t is the tax rate (assumed to be 40%)

**2007 Capitalization Rate Study**  
**Railroad Companies**  
**Capital Structure**

| a                             | b                       | c                            | d                                       | e                                    | f                                  | h                          | i                         | j                      | l                     |
|-------------------------------|-------------------------|------------------------------|---|--------------------------------------|------------------------------------|----------------------------|---------------------------|------------------------|-----------------------|
| Value Line<br>Rating          | Moody<br>Bond<br>Rating | Company Name                 | Common<br>Stock<br>Outstanding<br>(000) | Common<br>Stock<br>Price<br>12/29/06 | Market<br>Value<br>Equity<br>(000) | Long Term<br>Debt<br>(000) | Total<br>Capital<br>(000) | Long Term<br>Debt<br>% | Common<br>Equity<br>% |
| <b>Class 1 Railroads:</b>     |                         |                              |   |                                      |                                    |                            |                           |                        |                       |
| A                             | NR                      | Union Pacific Corp.          | 269,720                                 | 92.02                                | 24,819,634                         | 6,657,000                  | 31,476,634                | 21.15%                 | 78.85%                |
| B++                           | NR                      | Burlington Northern Santa Fe | 359,207                                 | 73.81                                | 26,513,069                         | 6,611,000                  | 33,124,069                | 19.96%                 | 80.04%                |
| B++                           | NR                      | CSX Corp.                    | 435,182                                 | 34.43                                | 14,983,316                         | 4,937,000                  | 19,920,316                | 24.78%                 | 75.22%                |
| B+                            | NR                      | Norfolk Southern Corp.       | 396,892                                 | 50.29                                | 19,959,699                         | 6,141,000                  | 26,100,699                | 23.53%                 | 76.47%                |
|                               |                         | Total                        |   |                                      |                                    |                            | <u><u>110,621,718</u></u> |                        |                       |
|                               |                         |                              |   |                                      |                                    | Mean                       |                           | 22.35%                 | 77.65%                |
|                               |                         |                              |   |                                      |                                    | Median                     |                           | 22.34%                 | 77.66%                |
|                               |                         |                              |   |                                      |                                    | Weighted Average           |                           | 22.01%                 | 77.99%                |
| <b>Non-Class 1 Railroads:</b> |                         |                              |   |                                      |                                    |                            |                           |                        |                       |
| B+                            | NR                      | Genesee and Wyoming          | 41,815                                  | 26.24                                | 1,097,226                          | 232,200                    | 1,329,426                 | 17.47%                 | 82.53%                |
| B                             | NR                      | Rail America                 | 39,283                                  | 16.08                                | 631,671                            | 396,700                    | 1,028,371                 | 38.58%                 | 61.42%                |
|                               |                         | Total                        |   |                                      |                                    |                            | <u><u>2,357,796</u></u>   |                        |                       |
|                               |                         |                              |   |                                      |                                    | Mean                       |                           | 28.02%                 | 71.98%                |
|                               |                         |                              |   |                                      |                                    | Median                     |                           | 28.02%                 | 71.98%                |
|                               |                         |                              |   |                                      |                                    | Weighted Average           |                           | 26.67%                 | 73.33%                |

| Recommended Capital Structures for lien date January 1, 2007 |  |  | Equity | Debt |
|--|--|--|--------|------|
| Class 1 Railroads:   |  |  | 75%    | 25%  |
| Non-Class 1 Railroads:                                       |  |  | 60%    | 40%  |

**2007 Capitalization Rate Study**  
**Railroad Companies**  
**Interpolation of Railroad Bond and Preferred Stock Yields**

| Yield Increment from Moody Average Bond Ratings |                          |                      |                               |
|---|--------------------------|----------------------|-------------------------------|
| a   | b                        | c                    | d                             |
| Moody Average Rating                            | Moody Average Bond Yield | Number of Increments | Incremental Increase<br>(b/c) |

|            |                     |   |       |
|------------|---------------------|---|-------|
| Aa = Aa2   | 5.72%               |   |       |
| A = A2     | <u>5.92%</u>        |   |       |
| Difference | <u><u>0.21%</u></u> | 3 | 0.07% |
|            |                     |   |       |
| A = A2     | 5.92%               |   |       |
| Baa = Baa2 | <u>6.35%</u>        |   |       |
| Difference | <u><u>0.43%</u></u> | 3 | 0.14% |

| Interpolated Railroad Bond Yield |                          |                      |                         |
|----------------------------------|--------------------------|----------------------|-------------------------|
| a                                | b                        | c                    | d                       |
| Moody Average Rating             | Moody Average Bond Yield | Incremental Increase | Interpolated Bond Yield |
| Aa2                              | 5.715%                   |                      | 5.72%                   |
| Aa3                              |                          | 0.07%                | 5.78%                   |
| A1                               |                          | 0.07%                | 5.85%                   |
| A2                               | 5.920%                   |                      | 5.92%                   |
| A3                               |                          | 0.14%                | 6.06%                   |
| Baa1                             |                          | 0.14%                | 6.20%                   |
| Baa2                             | 6.345%                   |                      | 6.35%                   |
| Baa3                             |                          | 0.14%                | 6.49%                   |



**2007 Capitalization Rate Study**  
**Railroad Companies**  
**Debt Yield Rates**

| Bond Rating | Industrial | Public<br>Utility | 2006<br>Average |
|-------------|------------|-------------------|-----------------|
| Aaa         | 5.46%      | NA                | 5.46%           |
| Aa          | 5.68%      | 5.75%             | 5.72%           |
| A           | 5.89%      | 5.95%             | 5.92%           |
| Baa         | 6.51%      | 6.18%             | 6.35%           |

Source: Moody's Daily Long-Term Corporate Bond Yield Averages as of December 29, 2006